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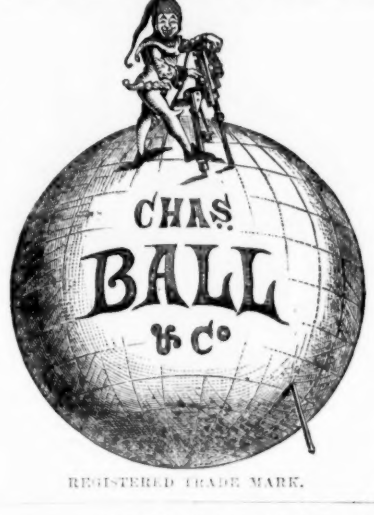

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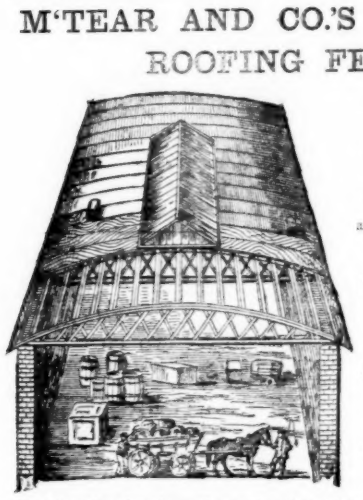

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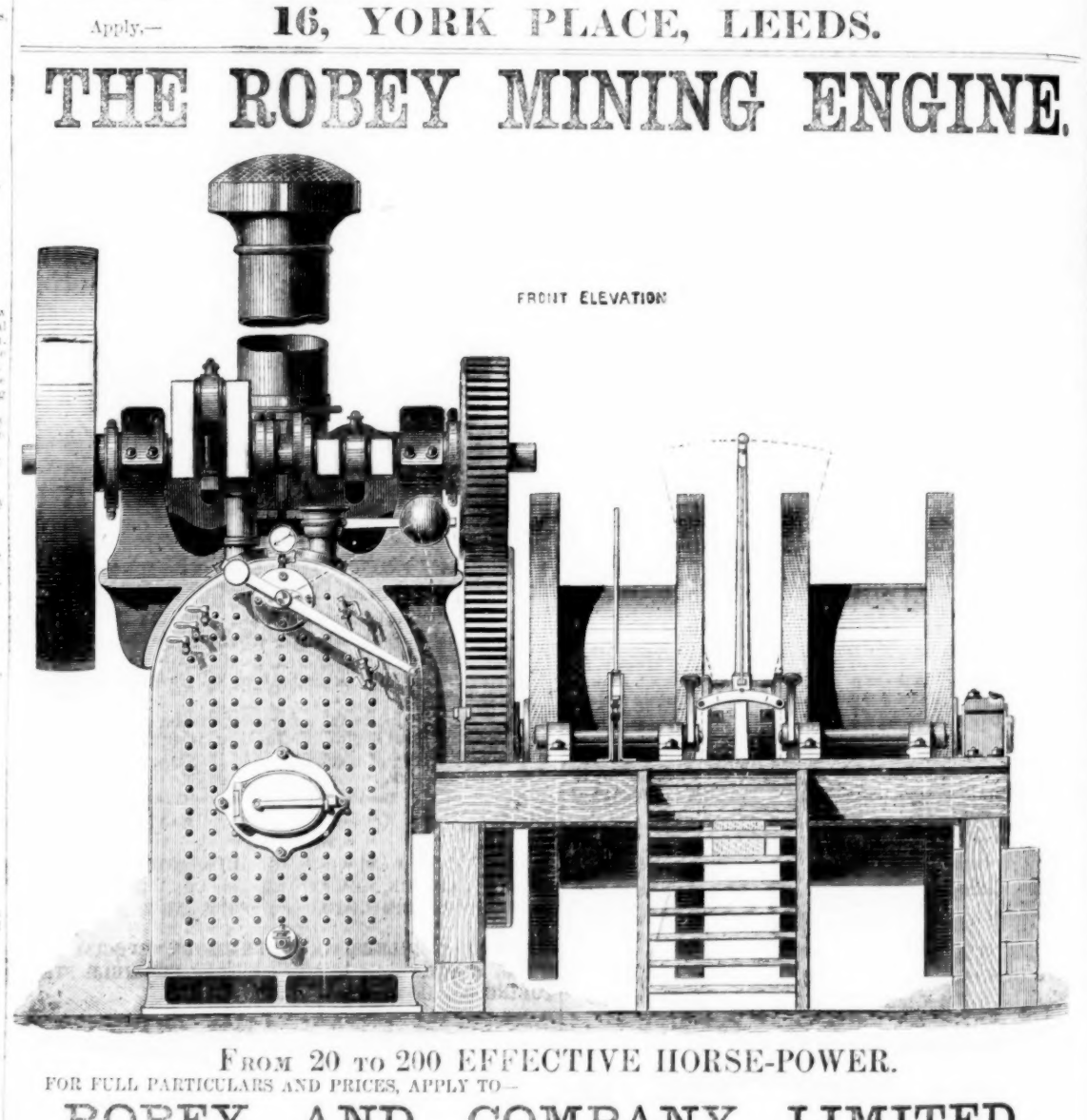

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ON IRON AND COAL SPECULATIONS.

Sir,—In last week's Journal there is an article on "Iron and Coal Speculations," the effect of which will be to make many an adventurer in them tremble for the future, when the game that has been so boldly played for the last year will have played itself out. Yes, Mr. Editor, it is a fact, a notorious and incontrovertible fact, that many properties which were a burden and an incumberance to the owners have been sold to joint-stock companies for five, ten, or even twenty times their value, even in the palmiest days of their existence. Some owners and promoters have unblushingly combined together to dupe the poor and confiding investor. Some owners have received three and four times the value of their properties in cash, and are then sufficiently considerate to accept it three or four times more in paid up shares, and this to show their appreciation of the public "confidence." Some promoters, after having launched their worthless concerns, have received small or large fortunes in hard cash, besides fully paid-up shares, whilst the poor shareholder who has been duped finds, on looking over the share list some time after the formation of the company, that shares in the concern in which he embarked so faithfully are to be had for 50 or 60 per cent. less than the prospectus issue. It is easy to understand where these shares spring from. A day of reckoning must soon come, for already I see the shareholders are beginning to find out—and to make it known, too—that they have been lured by "untruthful prospectuses" to part with their money; and it is to be hoped, having the remedy in their own hands, they will not fail to use it. But, as I said before, the game is pretty well played out; and one proof of it is the lingering, though desperate, manner in which the latest concerns have been, or are trying to be, floated. There is an old French proverb which runs thus—"Those who laugh the last, laugh the heartiest," and it strikes me very forcibly that those who are now gloating over their suddenly acquired, but ill-gotten, wealth will yet, and that shortly, see the day of retribution. "Justice has leaden feet, but iron claws."

Certainly there have been some really genuine transactions, and what is most astonishing is that these really good concerns have changed hands at prices, if anything, not one jot beyond their value, but they may almost be counted on the fingers of one hand.

I trust you will find space for these few remarks in your valuable Journal, as they may, even now at the eleventh hour, bear good fruit.

Clapham, Nov. 24. An Old Colliery Viewer.

IRON ORES ON THE LAHN.

Sir,—Nassau, as many of your readers are aware, is rich in minerals, especially in ironstone, manganese, and phosphorite. At another time I may, with your permission, furnish the readers of your Journal with some notes on the mode of occurrence of these minerals in this district, the method of mining for, washing them, &c. I recently visited Grube Schottenbach (Schottenbach Mine), near Graeveneck, on the Lahn, and took the following notes, which may be of interest to some who have had no opportunity of visiting this flourishing province. The mine is one of numerous concessions belonging to the Nievener Bergwerks und Huttenverein, whose smelting works are situated directly on the Lahn, between Ems and Ober Lahnstein. The mine is simply a large excavation in the open fields. Overlying the Devonian limestone, which sometimes crops out at surface, is a bed of iron ore some 20 to 25 feet in thickness, which is exposed by the removal of an overburden of soil and alluvium, varying in thickness from 2 or 3 feet to 20 feet. The ore is soft and argillaceous, and of a dark-brown colour, containing manganese (the "manganhattige-eisenstein" of the Germans). It usually contains about 43 per cent. of iron and manganese—from 30 to 35 per cent. of iron, and from 8 to 13 per cent. of manganese.

The mode of working is simple and inexpensive. The bed is removed in terraces or stopes, some 10 ft. in vertical section; the face of the stope is undercut with the pick, and a series of long wood wedges, shod with iron, are driven in a line along the top of the stope, by which whole masses—sometimes as much as 10 tons—are brought down at a time. The ore is at once put into wagons, and trammed away some distance to the carts which take it to the railway station, whence it is sent to the Nievener Hütte (smelting works). Taking the whole number of men into account, trammers as well as miners (there are now about 20 employed), each man, it is calculated, breaks about 5 tons of ironstone per day. The cost of raising and transport is as follows:—Cost of breaking on piecework, per ton, 6½d.; tramming to carts, 3d.; cartage to railway, 1s. 3½d.; railway freight to the company's works, 1s. 9d. = 3s. 10d. per ton. The value of a 10-ton truck of the above ore is about 30 thalers, or 4l. 10s., or (say) 9s. per ton.—*Lahn, Nov.* 25. J. G.

NOTES ON MEXICO, LOWER CALIFORNIA.

Sir,—The peninsula, territory of Lower California, Mexico, is about 600 miles long, extending from Cape St. Lucas to San Diego, and, with the exception of a few spots, may be considered barren, growing nothing but cactus trees. At Magdalena Bay, which is a fine shelter for vessels, are a few inhabitants living solely on the archilla business, which they ship to Europe and other parts. La Pass, on the Gulf side, is the principal town, the capital of the territory, the town is well laid out close to the harbour, which is very finely situated, and provides great shelter to vessels of all sizes. The Triumfo Mines, situate in the mountains about 45 miles from this place, are being worked with great success, yielding from $30,000 to $40,000 in silver bullion monthly. These mines, with the pearl fishery and little stock raising, are the principal resources for the inhabitants.

Toreto, in latitude 26°, is considered a good stopping place, being provided with a well in sandstone formation, and is remarkable for the water rising and falling with the tide. The entire country affords but very little water, and is bad for travellers, who have to pack water for a whole day's trip. Near this place is a mine containing native copper. The lode is in granite, and has a granite gangue; the copper is distributed throughout in small specks, requiring a crusher and dressing apparatus to make it marketable; at present it is full of water. It is owned by a Cornishman, who has spent upwards of $60,000, without, I believe, making any return. I hear he has succeeded in forming a company to drain the property and enable him to put it on the New York or London market.

In proceeding up the coast of the Gulf we strike Mulege Bay, in latitude 26° 53' the entrance to which is about three miles wide facing the north. It is very extensive, and provides shelter for vessels from every wind. It bears a great notoriety for its production of pearls. On the western coast of the bay is a well of fresh water, remarkable also for its rising and falling with the tide; there is a communication between the mountain and the well, which is merely a hole 12 inches in diameter, and of the same depth, situated close to high-water mark, and is the only fresh water between Loreto and Mulege.

Mulege village, which has a population of 500 people, lies three miles south-west from Sombrerito (hat), a conspicuous landmark standing on the main beach, from which point a large river flows up to the village, capable of floating large-sized boats at high water, on the banks of which dates, limes, and different kinds of fruit are grown in great abundance and to great perfection. The climate is healthy. The rainy season sets in in June, and continues to the end of October, which months are generally excessively warm, and the time of the hurricanes which, when they break, last sometimes one hour and so long as three. The inhabitants subsist principally by the mines, pearl fishieries, and stock raising. The whole of this country to the north contains but little other than cactus trees and bush, with a few spots of white timber land. It has principally a stony bottom, with very little natural soil, and as some parts on the border of the Gulf are much below sea level, it is of a swampy character, and the water is brackish, particularly about El Pariso.

Forty miles north-west of Mulege commences the copper mining, extending over a surface, at intervals, about 20 miles north and 10 miles west from the Gulf. The product is principally green carbonates of copper, formed in sandstone and yellow ferruginous clay, apparently the under strata of alluvial formation, through which deep canyons have been cut by the continued action of the floods. The veins generally are horizontal, rarely dipping, and never known to exceed 10° with the horizon; they are very uncertain in their yield, and pay badly, although worked by the cheapest labour. The veins vary in size from 3 inches to 3 feet, and yield an average of about 8 per cent. The ore is generally assorted for the purchasers here to 20 per cent., when it is shipped to Liverpool and Germany, the purchasers paying them a certain price per unit. In this vicinity are very extensive quarries of first-class gypsum, at the present wholly neglected. From this section north, until within a short distance of San Rafael, the mountains, I may say, are wholly unexplored, resulting undoubtedly from the excessive dryness of the country for animal feed, and no water for man or beast.

San Francisco, Nov. 3. James White.

LEAD IN MISSOURI, AMERICA.

Sir,—In the *Mining Journal* for Sept. 27 I find an article headed Lead in Utah, about extraordinary discoveries of lead near Baxter Springs and Japlin. What is said there about solid nuggets from 4 to 7 tons is quite true, but the localities are not in Utah but in Missouri. Japlin is in Jasper Co., Missouri, and near Japlin is Minersville, where a few weeks ago a solid mass of galena was found 60,000 lbs. in weight, and, as we say, under the grass roots. The ore is, as everywhere in south-west Missouri, quite pure, without any foreign metals mixed, unless very little blende or silicate of zinc. The lead ore has no silver. The galena occurs in irregular deposits, imbedded generally in clay, forming shapeless chunks or irregular cubes of sometimes very large size. Of similar character are the deposits at the Granby Mines, Newton Co., Mo., which were worked years before the war.—*Utah, Oct.* 31. A. V. Weise.

[We should feel obliged if our correspondent would favour us with some particulars of the Granby, and other mines, in the district referred to.]

THE FLAGSTAFF MINE, AND ITS MANAGEMENT.

Sir,—I have recently returned from Utah, and have seen with no little surprise the attack made upon Capt. Forbes, by "Observer," in last week's Journal. I can assert, from my own knowledge, that Capt. Forbes has never sold a share of the Flagstaff Mine since he became connected with the company and went out to America on its behalf. Further, he is not interested in any "bear" movement. Is it reasonable to suppose that he is so interested, seeing that, to my knowledge, he has advanced his own money on more than one occasion to enable the company to tide over critical moments of difficulty, when a heavy load of debt was pressing upon it? Had he been a "Bear," or connected with "Bears," his policy would have been different. Capt. Forbes did not receive $50,000 from the Flagstaff, but 1000*l.* was promised to him. When I left Utah, six weeks ago, he had not received even that sum.

When all the correspondence shall be published I believe it will be seen that Capt. Forbes has not misled the directors either as to the prospective payment of dividends, or upon any other point. Capt. Forbes will soon be in England, and I believe that the publication of all papers which will then inevitably take place will show how hard he has worked, and with what difficulties he has had to contend on both sides of the Atlantic. In the meanwhile I would beg your readers to suspend their judgment, and not to be led away by anonymous attacks against a man who is absent.

Victoria-street, Nov. 25. A. B. Mitford.

SILVER IN COPPER ORES.

Sir,—Mr. Bawden has come to the rescue of Mr. Barnard with regard to the yield of silver in the copper ores of the district in which they reside, and states that the estimate given of the average produce is the correct one. This, so far as it goes, must be satisfactory to Mr. Barnard; at the same time, it must be very trying to find his friend, whilst attempting to help him out of a difficulty, laying claim to the honour he himself has been so proud of as the foremost in this race of original discovery. A tolerably long list of mines has been furnished as evidence of the existence of silver to the extent, upon an average, of 6 ounces of silver to the ton of copper ores.

In the first place, I must be allowed to eliminate from this list several which, unfortunately, are in the category of mines that have ceased working; others are in abeyance, and several of the remainder would scarcely make the two ends meet if the whole of the raisings happened to be silver ores instead of copper.

Taking the mines in the district which are making fair returns of copper ores as a reasonable test of the yield of silver, I believe it will be found that the Prince of Wales is about the only one that produces silver to the extent named. I have had opportunities of seeing the assays of samples of several of the mines named in the list furnished, and all of these fail to reach Mr. Bawden's result; the samples from one of the mines named scarcely yielding a trace of silver.

Whatever the actual average may be, it should be fairly understood that the presence of silver in copper ores is by no means a new discovery, and it will be found that there is scarcely a mine agent in the whole district but knows the percentage of silver his ores will yield, and who is as desirous as your correspondents to see some means adopted whereby it may be made a marketable commodity, for the benefit of his employers.

They all of them know but too well, however, that the whole of the copper lodes hitherto found in England do not produce 6 ounces of silver per ton of mineralised matter, nor anything like it, nor will the selected ores sent to the Ticketings produce that quantity.

It is satisfactory to observe that works on an extensive scale are being erected in the neighbourhood of Plymouth for the special treatment of this class of ores, and from the established high reputation of the analytical chemists engaged in these works it may fairly be anticipated that the enterprise will prove a success.

Nov. 25. Observer.

THE CARDIFF AND SWANSEA SMOKELESS STEAM COAL COMPANY.

Sir,—I see by the Journal of Nov. 15 that the directors of the Cardiff and Swansea Smokeless Steam Coal Company (Limited) propose paying to the shareholders another interim dividend, on Dec. 1, at the rate of 10 per cent. per annum, upon profits stated to amount to 25 per cent. per annum. May I, through your fair and impartial Journal, ask some co-shareholder, upon what grounds the directors feel justified in withholding 60 per cent. of the shareholders' money? If the profits are 25 per cent., why not hand them over to those whose property they are? Will it be said that it is in order to maintain a suitable reserve? If so, I would ask what further reserve is required than the remaining 60 per cent. of the shares still unpaid and uncalled. I, in common with many shareholders in the company, cannot see the force or justice of their policy. I believe that the majority of the shareholders are desirous, and even anxious, to pay up their shares in full, and this for the following reasons:—It would employ capital they are compelled to hold in readiness for calls, now comparatively unproductive; and, again, it would be a step towards putting them on a par with the fortunate vendors, whose shares are fully paid, and who, in consequence, take the lion's share of the profits, whilst the small outside investor who hoped to have his shares fully paid up in due course finds himself foiled, and only receives such driblets of dividends on the small paid-up portion of his shares that in the aggregate amount almost to a nullity. For my own part, I am a comparative stranger in this country, and this is my first investment in a British concern, but I shall, in my future transactions, be very cautious how I embark my capital in any concern where "the vendors' confidence in it is so great" that they take about the market value of the property in fully paid-up shares; for (without prejudice, and with all due respect to those whom it may concern) the above confidence, &c., appears to me to be simply another mode (with no risks and immense advantages) of raising funds for the exploitation of a concern which, without them, would be on the wane; and where the outside investor, without whose money the concern could not have been floated, is (unless his shares be fully paid-up on allotment) doomed to disappointment and probable ultimate loss. I say, then, let the directors hand over to the shareholders the proceeds of their money, and if, afterwards, money is required, let them, as in duty bound, make their calls. Upon a further perusal of the same article, I find that another company of the same nature, and in the same county, are about to declare a 15 per cent. dividend upon a 20 per cent. profit, and this in the face of a fully paid-up capital, where I can understand that some reserve is necessary. I trust that you will find space for these fair and straightforward comments in your next issue.

Roshercille, Nov. 21. An Outside Shareholder.

MINING IN WALES.

Sir,—At a time when home mining generally is in a state of great depression it is cheering to be able to record that there are undoubted signs of vitality in the districts of the Principality which we have recently visited. The unprecedented increase in the prices of labour, coal, and other materials, combined with depressed quotations for metals, have caused many of our home mines to be abandoned, which under more favourable auspices would still have been affording employment to a large proportion of the mining population now driven to emigration or temporary pauperism until times revive, whilst other mines which were returning dividends to the shareholders have been driven to make calls of serious amounts. To all who have carefully reflected upon the causes which have brought about the present position of the mining share market, it must be patent that there will shortly be a very considerable reaction. The great bugbear for the last eighteen months has been the threatened influx of Australian tin, and sufficient has been certainly imported to give the smelters a fair excuse for increasing their profits at the expense of the mining interest generally. It would appear, however, from information recently received, that this tin, which was to be found in such abundance as to utterly swamp our home markets, has been procured at a cost which will not only not remunerate the proprietors, but has reduced them to the verge of bankruptcy, while the produce of our home mines has, under the influence of such adverse circumstances, greatly declined. Considering the effect produced by the fast-recurring panics in the various continental cities and America upon foreign bonds, railways, and what are generally regarded as the most stable of securities, the fluctuations in our home mining adventures undoubtedly prove that this species of enterprise is in an unusually healthy condition. It is greatly to be regretted that such a vast amount of English capital has been hopelessly sunk in foreign gold and silver mines, which judiciously invested in home mines would not only have brought prosperity to the mining districts but proved remunerative to the shareholders. At the present time there are many properties lying idle which only require a little time, capital, and energy in their development to prove valuable prizes. While the present high prices rule for coal and labour those mines which can be effectually and solely worked by water-power must enjoy material advantages; and there are few localities which can boast of such unusual facilities for the economical development of their mineral resources as the districts we have recently visited.

Van Consols.—Van Consols has recently sampled 100 tons of lead ore, and the mine is improving. An engine is in course of erection to prevent any delay being caused should the big water-wheel (the largest in the Principality) be, as often occurs in winter, unable to perform its usual duty. We understand that the deep adit is being vigorously prosecuted, which is a feature of the greatest importance.

Brynpostig.—This mine is, we hear, about to be re-worked, and with a fair amount of capital and energy ought to prove a profitable adventure.

Grogwinion.—This mine is looking remarkably well, and should it not prove a prize it will not be the fault of the mine or the manager, Capt. Kitto.

Van.—The manager must have had an anxious time to keep up the dividends, considering the high prices for coals which have ruled during the past year. Shareholders should make due allowance for the many peculiar difficulties which have to be overcome.

East Van has, up to the present time, proved a sad disappointment, and we regret that we cannot announce any material improvement in the lode.

Central Van is a small sett, and, we fear, will not repay the shareholders for their outlay.

Llanidloes Wheal Van is likely to succumb to its difficulties.

Glan Severn is a promising young mine, and is being prosecuted with great energy. The new water-wheel, 25 ft. in diameter and 3 ft. breast, will be completed in a few days, when they will be able to continue the sinking of the shaft. The adit level has been driven upon a fine lode, which has produced good stones of lead, and from the matrix we anticipate that good discoveries of ore will be met with in depth. At present the end is poor, the adit having apparently left the lode, but the manager expects that a short crosscut will lead to good results. The mine adjoins the celebrated Pant Mawr, to re-work which we understand a company is about to be formed.

Great West Van.—The recent important discovery in this mine has already caused considerable excitement. The lode in the winze has been valued at 4 tons to the fathom. We were greatly indebted to the courtesy of the manager, who had already been underground with an inspecting agent, for the facilities he afforded us to make a thorough inspection of the mine, occupying several hours. The extent of ore ground laid open is very considerable, and the mine is evidently improving in depth. From the appearance of the shallower workings immense quantities of ore must have been extracted previous to the formation of the present company. The dressing machinery is in a very efficient state, and the reduction of the ore will be greatly facilitated when the patent stone-crusher in course of erection is ready for work. The aggregate value of the ends and winzes can be seen by the agent's report.

West Esgair Lle is likely to prove one of the most important mines in the district. The machinery and dressing-floors are evidently intended to meet the requirements of an extensive mine. There are literally two mines; the eastern and western, one producing immense quantities of blende, which can be returned at a good profit, and the other having one of the finest lead lodes which steadily improves in depth. The financial position of this company is in a very healthy state.

Tyllwyd.—Tyllwyd is a very extensive sett, having about ¾ of a mile on the run of the lodes. The natural characteristics are everything that can be desired for successful mining. There is abundance of water-power at all seasons, and unusual facilities for the economical extraction of the ore. The vast amount of ore ground which has been stoped away by the old workers at a very shallow depth, and the immense quantity of halvans at surface, which it has been estimated ought, when the dressing machinery is constructed, to be worth several thousand pounds, evidently prove that even when metals were at a very low price it must have been a very valuable property. The amount of work which has been accomplished by the present company in so short a time testifies to the energy which has marked the operations of the company so far. Taking into consideration the time necessarily occupied in clearing out the old workings, we were surprised at the amount of ground which has since been explored. First-class offices have been erected, including carpenters' and blacksmiths' shops and account-house, and a splendid new water-wheel—40 ft. in diameter and 4 ft. breast—is nearly completed, when the sinking of the shaft can be more expeditiously and economically prosecuted. This is, in our opinion, the most important feature in the mine, as in this district the best-paying mines have always proved richest in depth. The workings are at present confined to the development of the three principal lodes—the South, Middle, and North lodes. Entering the adit level on the South lode we found that it had been driven 30 fms., and evidently with good results, and when proved from the shaft at the depth decided upon good stoping ground will, doubtless, be laid open. The Middle lode is about 14 fms. from the South lode, and has been worked upon for upwards of 100 fms., and can now be worked at a profit. The North lode is about 14 fms. from the Middle lode. All of these lodes will form a junction in the sett, at which point very valuable discoveries of ore must be expected. The company is constituted

with a capital of 12,000*l.*, in 12,000 shares of 1*l.* each, fully paid up. And as at the present time, after all the vast amount of preliminary work has been accomplished and paid for, there is an available working capital of about 6,000*l.*, it will be seen that the promoters must have been most moderate in their demands—rather a novel feature in this age of enormous capitals and disproportionate promotion moneys. From the foregoing remarks it will be apparent that this mine has, in our opinion, great chances of success, while the working expenses will be comparatively small; and we were much pleased to observe that the management is spending the money in a legitimate and miner-like way to develope the resources of the property, instead of, as is too often the case, frittering it away in shallow researches. As a legitimate mining investment the public may with confidence invest in these shares.

BLAEN CAELAN.—We were pleased to learn that there is an important improvement in this mine. The shares were formerly in great request by investors, but have for some time past been utterly neglected. They are well worth watching, and likely soon to command a much higher market value.

Our recent visits to the mining districts of Wales have impressed us with the conviction that the prospects of mining there are decidedly improving, and that ere long we shall witness a marked renewal of activity in the shares of the principal mines.

29, *Bishopsgate-street Within, E.C.* W. MARLBOROUGH & Co.

MONEY AND FINANCE.

[The following letter was unfortunately omitted last week].

SIR,—The application of the "screw" at the Bank of England in raising the minimum rate of interest from 5 to 6, 7, 8, 9, and, with exceptional transactions, to even 10 to 12 per cent., has had the desired effect, and money comes tumbling into its coffers with a certainty of continuance that cannot otherwise than prove refreshing to the thirsty souls of those associated with enterprise, and especially the industrious and persevering miner, whose energies no obstacles can daunt or difficulties extinguish in his arduous pursuit. The advance in the rate we predicted some weeks ago through your valuable columns, and we now give it as our opinion that ere Christmas it will have returned to what we regard as the normal value of money—5 per cent., or, at least, to 6 per cent. The trade and manufacture of the country are prosperous, expansive, and remunerative, while the changes that take place in the rate of interest are wholly attributable to other causes than those of a commercial character. The demand for gold coinage in Germany has already locked up 50,000,000*l.* The Government dare not circulate this vast sum, as it would soon find its way into the coffers of the Bank of England. Germany has a silver currency of 90,000,000*l.*, which it wants to supplant by gold, but how is it to be done? Who will buy the silver? Surely not England!

The substitution of a gold currency in Germany is a most difficult problem to solve, and, probably, the necessities of that country will compel the issue of the gold in reserve long before the silver is redeemed. It must be remembered that this total is equal to fully one-ninth of the entire national debt of England. Again, this gold is unproductive so long as it remains uncirculated; while, on the other hand, the "Exchanges" would soon distribute it throughout the several centres of Europe were it once released. It is probable that a few months will see Germany a less frequent purchaser of gold than at the present moment. The gold currency in England is not, as Mr. Disraeli remarked, the cause of England's prosperity, but the result of its success. Germany will not be enabled to withdraw its silver currency under a period of 10 to 20 years.

In respect to the mining interests of Cornwall, there can be little doubt entertained of the worst days of "decadence" having passed, and that the future is fraught with more than usual promise. The decline in value of all the great and formerly prosperous companies had a very depressing influence over even the existing dividend properties. In fact, Dolcoath, Tincroft, East Pool, Kitty, Carn Brea, Basset, Great Vor, Botallack, Owles, Providence and others have had to encounter sad reverses, and sell at prices that cannot but remunerate investors so soon as the metal market recovers the depression consequent on the late high value of money.

As to speculative concerns that a year ago commanded almost exclusive attention, the shares have in most cases become distributed, and their connection with market dealers all but collapsed. These old favourites have seen their day, and will unquestionably be supplemented by other and fresh undertakings. It is, however, a feature to be observed in respect to the future that none should be selected otherwise than shallow, inexpensive, and ascertained productive mines. There are enough of these without scrambling about the mountains, or digging holes in unproven ground, in search of minerals which do not exist, and which practical authority, at starting, would pronounce barren and worthless. We have so often directed attention to intrinsically valuable progressive undertakings that it seems almost superfluous again to refer to them. Still, the Balmynheir Tin Mines (Limited), at 2*l.* a share, is well worthy the immediate attention of all. The reserves are large, the points of operation productive while the monthly sales are certain to augment, and without a corresponding advance in costs. In conclusion, the ores can be raised to surface at a cost of 5*s.* in 1*l.*, while the deepest workings are only 25 fms. under the surface.

Again, respecting Llanrwst, in the county of Carnarvon, few, at least of the uninitiated public, possess the data, or even the key, to the present and future position of this valuable property. The results achieved are somewhat startling, and the prospective promises to prove unusually expansive. The shares fully paid-up stand at 2*l.* 10*s.*, or 10*s.* prem., while the prospects are not excelled by any virgin mine in the Principality. East Balleswidden is increasing the monthly sales. Water machinery supplants steam, and saves cost of fuel. The usual quarterly dividend will be paid. Zennor shares have been in request, and a short cross-cut will intersect the lodes at sea level. TREDINNICK AND Co.,

Mining Engineers, and Dealers in Stocks and Shares.

32, *Fleet-street, Nov.* 20.

MINERS' CONVERSATIONS—No. VI.

Bill.—I am glad to tell you one fact in favour of mining.

John.—What is that?

Bill.—That the price of coal will shortly drop considerably. I have just seen Capt. W——, who told me that his father, who returned from London a few days ago, saw there a large coal proprietor, who said that the price of coal is sure to come down at least 10*s.* per ton.

John.—I am delighted to hear it, on my own account and that of the mines, which are sadly burthened by the enormous price now paid.

Bill.—The captains of the mines say that there is another cause of complaint, and that is the insufficient price paid for the tin by the smelters.

John.—Yes; and owing to that Capt. Teague is about to form a tin smelting company.

Bill.—So I find; but a merchant and smelter of immense wealth said to an agent a few days ago that Capt. Teague would not invest his own money in the company, but would induce others to do it. If he believes the smelting business to be so very profitable I should think he would readily subscribe to the capital required for carrying it on.

John.—Captain Teague may think that there is a risk in opposing the great capitalists—such as Williams and Co., Bolitho and Co., &c., who are in that trade. If so, he would rather let the risk fall on other people. He is singularly cautious.

Bill.—I have always regarded the tin business as a very queer one, the smelters giving just what they please for tin sold, without competition.

John.—I have no doubt that Capt. Teague can get any amount of capital subscribed.

Bill.—Of all the mine agents in Cornwall who has been the most successful in finding good mines?

John.—Capt. R. Pryor, I believe. He has good mines in New Great Consols, St. Just Amalgamated, Phœnix lead mine, and some others, and those not now giving dividends are likely to do so by-and-bye.

Bill.—Capt. Pryor was a practical miner, and so was Capt. Teague—a good tributer—but Capt. Teague never discovered a good mine; he enters in upon the discoveries of other people. He did so in all his mines, and now he is likely to take the pursership and management of West Seton. Capt. Josiah Thomas never discovered a mine; he took the place of his father at Dolcoath and other mines as manager, having never worked as a miner; but I suppose he has learnt a good deal from observation of what miners have done, and has credit for knowing much about minerals, &c. He is the manager of Dolcoath, Cook's Kitchen, South Crofty, West Frances, and North Roskear, and is frequently elsewhere reporting on mines, so that altogether his income must be large, and it will take a large income to keep open the mansion he has built at Camborne.

John.—It is remarkable that East Basset since the change of managers has so much increased its returns. Under the late manager about 2 tons of tin per month only was returned; now about 5 or 6 tons. How do you account for that?

Bill.—The incapacity of the previous manager, or something worse.

John.—What can the worse be?

Bill.—People have said that it was intended to stop the mine, that the sett might be added to another, but I cannot say that there is any truth in the supposition; it may be a mere surmise. I am glad that the company is likely to derive some benefit from the working under Capt. Pryor's management. I find the cost has been considerably reduced, because the expenditure consequent on the bad state in which Capt. Pryor found the mine is ended, and the winze from the 60 to the 70 is holed, whereby good ventilation is secured, and more tin ground opened. I hear that the mine altogether is looking well.

John.—Did you ever know Mr. Richard Skinner, who used to live in Gwennap?

Bill.—I have heard of him and his father, Capt. Richard Skinner, who was a manager of mines under the Messrs. Williams. Why do you ask?

John.—Because I never walk by Wheal Cupid without thinking of him, and that is because 27 years ago he mysteriously disappeared from his home and country. He was at the London Inn in this town of a Friday evening, where he took a glass or two of gin-and-water. After that he was never seen again. People at first thought that he had fallen into Wheal Cupid engine-shaft (then idle), but since then the water has been pumped out and his body not found. Then it was supposed he had fallen into one of Wheal Damsel shafts, but the mine has been drained since but no body found. What became of him no one knows. I don't suppose that he was taken up to heaven bodily, like Elijah, nor buried on the top of a mountain, like Moses. He was a very studious young man, and had devoted a great deal of time and incurred much expense in endeavouring to perfect a plan for the extraction of inflammable gas from water, to save the use of that prepared from coal. He left the world (*I presume* he has left) before the utilisation of his scheme. Some people have supposed that he came to his end by murder, but the real cause is still a secret, to be revealed probably in the Day of Judgment.

John.—The mention of the London Inn reminds me of another circumstance that happened a few years ago on a Friday evening. Mr. John Lether, a very intelligent small farmer, &c., left Redruth for his home at Wheal Rose. He missed his way in the darkness of the night and fell into a shaft at North Downs, and was found dead after a day or two with his hands in his pockets! AGENT.

St. Just, Nov. 26.

PRACTICAL MINING—SUGGESTIONS TO MINE AGENTS.

SIR,—I have been travelling through the West of Cornwall for the last fortnight, and did not see the Journal. I sent you no letter for last week. I now notice epistles from five or six anonymous writers, men whom I call loafers, who can be dispensed with in any mining district. Men who know nothing of mining. They never did honest work, but will write, do, or say anything. I do not believe one of them ever spent a day in a mine, neither do I believe they are, or ever were, employed as mine captains.

I noticed a letter in the Journal of Nov. 8, which stated that I laid out Drake Walls in such a way as to ruin the mine and kill half the men. You, Mr. Editor, must know that you are actionable, and are bound to give up to me that man's name. I seldom notice such writers, but I am bound to notice this. The truth is I worked in Brenton's shaft of that mine 7 years, over 60 years ago. No man was killed during that time. I lived within 1¼ mile of the mine for over 20 years, and I never heard of a single man being killed or injured, further than one named Trevaskis, who lost his hand. I left the mine 56 years ago; I have only passed through it two or three times since. I never had anything to do with the management of the mine, further than as a workman. The then manager, Capt. H. Brendon, offered me a situation when I left, but I had accepted one before. You, Mr. Editor, should not have published such a letter; but I am not in the least surprised at their being so outrageous. I disturbed the hornet's nest; I am undermining them in their trade, and they will have to work or emigrate. England will not hold them long; their game is up, or will be shortly. Were they mine agents they would have signed their names, and answered a few of my questions. If they had only told us what three or four Cornish ores mineralised with in their formation, and what they mean when they say the stratum is highly mineralised. With what? I do not ask them to answer my queries. I merely put the questions. They are only such as all miners ought to know, and should know, if they wish to keep pace with the age they live in. They want me to answer my own queries. I have told them that I am writing a book on Mining, in which I shall answer every question. They are for the reader to gain information. I do not expect them to answer even one; my object is to cause them to think. I am not to be duped by this class, I know them of old: but my questions are new to them. They say, why name the farmers? I will tell them. It is because they have so improved farming as to double their rent within the last 50 years. They have caused the price of land to rise 100 per cent., and the miner must do the same, or emigrate. He will have no abiding place in his native land. I should be right glad to take up the gauntlet with either of the lot, though I am busy getting up my book.

Then come the would-be professors, calling themselves geologists. There are a few of them who may be book-taught so far as to know the position of the layers of rocks. Most of them are what I call returned Australian convicts. But few of them have ever had a month's practice. That country would not hold them; they returned learned loafers, with not a sixpence in their pockets. As to their knowing the laws of the earth's interior, it is a matter of impossibility. They are a useless as a class. They do not know a lode, neither will they ever learn. I tell them, and the world, that they must be practical men who go into the earth and work, and they must work to learn mining laws. I would as soon undertake to teach a travelling tinker the outlines of the innermost laws of the earth as a book-taught professional or geologist. The next half-century will consign all they have written to the flames, or the waste paper basket. The best of them may know from books how the layers of the earth follow each other.

And then comes another writer who dares not put his name in the Journal. He pretends to tell what wonderful things miners do in America. How singular that he should have left America in such haste as to leave his brains behind him! It is clear he could do nothing there. He preferred returning to England without brains, and set up as a loafer. He asks a lot of common-place questions, that are below my notice. These are brought under everyone's eye; even the ladies are trying to economise coal; but he asks someone to tell how to cause water to run against the hill without the aid of coals, and how to make a wheelbarrow do the work of a steam-engine. The best plan I know of is to put the loafers to drive them. The returned loafers, with no brains, will never help us. Every thing they write condemns them. Had they seen these extraordinary things in America they would have picked them up quickly, returned to England, and managed to have patented them and made a fortune. Then, what has he done? Why, departed from America in such haste as to leave not only his brains behind but also his wits. He gets up those questions, and sells them to some one not a shade wiser than himself for 6*d.* to get a breakfast. I said before these are only common-place things, that the more shrewd working men will do their best to carry out, and the idle loafer will remain the loafer still. He is not likely to turn up again in Camborne; I think his last acts there finished him for that district.

To conclude, I may remark that I never met with a practical miner and geologist who was ashamed to put his name to what he wrote. It would disgrace even a good practical. I should like to meet such a man, when I should venture to tell him, from his own words, that he never was a practical in his life. His ignorance shows he has all to learn. I may tell him that Mr. Murchison on his return from Russia came 20 miles to consult me, and remained two days. He was not then Sir Roderick. I am to be found at Wadebridge. Should he stroll that way I will soon find out what he is made of. Will he tell me why every layer, from the granite up to the last form, changes in its component parts, and by what means; and if a bunch of black grapes is composed of the same parts as the tree they grew on? If not, what is the difference, and what caused it to differ? Will he tell the world where he ever found a paying mine, and what he was guided by to find it? Do not go out of England: stop at home, and show it, so that we may have proof.

I shall reply to no more anonymous letters: they are not worth even the ink. In fact, as a rule, I shun such company.

Wadebridge, Nov. 22. N. ENNOR.

PRACTICAL MINING—SUGGESTIONS TO MINE AGENTS.

SIR,—I have had occasion before now to remark in the columns of the *Mining Journal* that ignorance in some individuals is sometimes more highly esteemed than useful knowledge is in others. "A Member of the Mining Association," in the Supplement to last week's Journal, affords an apt illustration of what is intended. He seems to regard with remarkable complacency his acknowledged ignorance, and not only so, but to become infected under the reflection of its self-application. He assumes to be an oracle, and to possess the right of dictating to others what is proper and what is improper in their individual course of action and pursuits. He evidently experiences a sort of expansive sensation under the idea that he is "A Member of the Mining Association," just as if he took it for granted that it were universally admitted that that body was highly erudite and learned, and as such its members were regarded as the natural arbiters in all matters pertaining to mining. And individually he acts as though his connections with that famous institution was his perpetual passport to downright impertinence. He takes upon himself to interpose in favour of mine agents generally against the charge of apathy so frequently brought against them, and vindicates their prejudice and apathy alike from any cause of just censure by asserting that they are anxiously waiting to be satisfied respecting the practical value of any mechanical improvements which may be offered to them. He says, "Mine agents, as a rule, have been anxiously waiting to see some real improvement both in stamping, and crushing, as well as in the method of boring, by the numerous inventions recently brought forward, and would rejoice in adopting them if found effectual." Will "A Member of the Mining Association" be good enough to inform us by whom it is expected that the several improvements he speaks of are likely to be introduced and found effectual, if they are to be persistantly excluded from experimentation in the practice of mining? How is their adaptation and efficiency to be ascertained if no practical tests are allowed to be made on their behalf?

The gentlemen—for I suppose it is proper to style him as such by virtue of his distinguished connection—assumes to be a nice discriminator between things that are barren and those that are productive of good in practical mining, and yet those useful practical lessons on some of the most important of the subjects he has specified—the stamping and crushing of ores which were so clearly set forth and amply descanted upon in the columns of the Journal a few months since—do not appear to have attracted the least attention. If my memory serves me correctly it was stated by the one writer that whilst the Cornish stamps was as near perfection in principle as any mechanical appliance could be, it was susceptible of improvements in the detail amounting to 100 or more per cent. in its effective duty. This was not only stated, but it was shown how it might be accomplished. Where was "A Member of the Mining Association" at that time, and at other times when important practical measures have been brought before the Journal readers in its valued columns?

I am happy in being esteemed a friend by "A Member of the Mining Association," and will take the liberty of saying that if he feels himself a debtor to that institution I may have been more of a friend to him than he imagines, and in quite another sense from that in which he now recognises me. I was a member of the first committee which was formed in connection with that institution at Liskeard—if not the first which was formed in Cornwall, and was one of the earliest—if not the earliest—proposer and advocate, in concert with Mr. Matthew Loam, of Liskeard, the eminent mechanical engineer, of the necessity for the establishment of such an association.

Its inception arose from the ill adaptation of the Truro School of Mines to benefit the class for which it was established. I contended from the first that the Truro School of Mines must be a failure. It was organised and placed upon an eminence wholly above the reach of the working miner, and that all that it could be reasonably expected to accomplish was to make a few pupils arrogant from their supposed knowledge—knowledge no doubt, but lacking at the same time the necessary knowledge of its own uses, and how it should be applied. I regret that the Miners' Association, of which I was an early patron, should be productive of a similar kind of fruit. With men of this class it is sometimes convenient to assume all knowledge, and at others to interdict it. And hence we find "A Member of the Mining Association" undertaking to negative in the class to which he belongs an important branch of knowledge. His own words are—"The members of our class are not yet quite so far advanced as to attempt the discussion of the growth—formation—of metals." A confession of ignorance which ought to have made him blush rather than to have incited him to a sort of complaisant boasting on the score of such a deficiency. And yet this nameless member of a practically barren association takes upon himself to suggest lines of pursuit to men who probably had distinguished themselves in practical mining before he saw the light.

In reference to his suggestion that I should employ myself in bringing out—discovering—a good mine, let him read my letter in last week's Journal, and then tell me where I shall go next to perform this desirable operation, as this is not the first good mine I have succeeded in opening; and after they had completely baffled the united skill of more than one older captain than myself. I have no doubt but that by my own individual energy, both by precept and practice, I have done more to improve mining during my connection with it than "A Member of the Mining Association" and all his class put together, and that I as much transcend them now in practical skill and effective force as they do me in arrogance, assumption, and conceit. If it would be any satisfaction to "A Member of the Mining Association" to learn in how high estimation he and his *confreres* are held by me, I will undertake to work against any six of them in a sufficiently extensive and complicated field of metallic mining to afford scope for all our energies, abilities, and experience, and should be most happy to "descend from the clouds" at any time to make such an experiment. ROBT. KNAPP.

Llanrwst Lead Mine, Nov. 24.

THE RESPONSIBILITY OF DIRECTORS.

SIR,—The account of Captain Forbes's doings at the Flagstaff Mine, as given by "Observer," in last week's Journal, has an air of credibility, tested by the results of the last six months. The extravagance of the directors in giving him (it is to be hoped not unconditionally) a salary so disproportionate to his merits, whether he be knave or fool, is inexcusable; and it might have been matter for grumbling even had his mission resulted in the increase in place of the stoppage of our dividends. Although I would not hang the captain without trial, still, in the absence of any explanation by the board, there is nothing for it but to nurse our wrath, and keep it warm against the day of reckoning. When the directors give account of their stewardship it is barely possible they may save their honour at the expense of their capacity for managing the mine, and I would earnestly impress upon shareholders the necessity for some concerted action to secure better method of management in future. That security should be sought in requiring from directors the publication, not only of monthly accounts, but of the work doing and to be shortly done at the mine. With the promised maps and sections, these monthly or quarterly reports

would make shareholders take a personal interest in the management, which they cannot do at present in the outer darkness. Such reports would be read by all the readers of the Journal, and, though they might interfere with the amusements of the Stock Exchange, they would be a guarantee of the fidelity of directors to the weighty trust confided to their case, when they could invite the criticism of the shareholders. A SHAREHOLDER.

TAVISTOCK, AND ITS MINING PROSPECTS.

SIR,—The question of the hour with the people of Tavistock is, "Will mining revive? And well they may ask such a question. Perhaps never in the uneventful history of this town have the inhabitants realised how important an industry mining is with so much force and pecuniary discomfort as at the present time. Strangers, on entering the town, are always impressed by the beauty of its situation, and its clean and decorous appearance, but they cannot fail to observe the utter absence of stir and bustle incident to commercial prosperity; but if a stranger were to visit the place on such a dull, foggy November morning as it now is while I write, he would be surprised to see how these gloomy aspects are intensified and increased. There is a stillness and quietude which is oppressive. There is a thick feeling of depression manifest everywhere—in the shops, in the streets, and in the faces of the people. Men only half smile in this sleepy hollow; their laugh is but a barren simper, and their movements are as listless as if they were enervated by sorrow or despair. There is no apparent energy or enterprise, and the most active periods of the day are those at which the trains run, when the peaceful inhabitants are compelled to notice the exodus of the population which has supported the trade of the town. But while we thus depict the gloomy circumstances which prevail, we do not attempt to throw the onus of responsibility on the helpless and defenceless people, although it must be confessed that, with few exceptions, they have reluctantly, if at all, supported mining adventure, while, on the other hand, without the least regard to the legitimacy of the speculation, they have manifested the utmost avidity to make themselves the recipients of profits accruing from the employment of capital in this direction; nay, more than this, they have tabooed and discredited indiscriminately all efforts to promote mining. The day of retribution has arrived. Mines have been suspended, trade has decreased, and now, with ominous looks and shrugged shoulders, they sorrowfully enquire, Will mining revive? We cannot answer this question with positive assurance, but we assume from signs of the times that we shall, even in this depressed district, experience a return of mining activity, and the restoration of confidence in legitimate adventure.

The ground of our hope is based on the improvements which have taken place in some of the mines. We will cite a few instances:—Wheal Russell, which for years has been making calls, will shortly appear in the Dividend List; it is said that the directors, at the next meeting, will declare a dividend of 600*l.*, or 1*s.* per share; the prospects of the mine are good. Clitters, also, is considerably improved; it is reported they have a fine course of ore in the 164 fm. level, both east and west; the next call will be small, and should the improvement continue we presume the mine will shortly pay profit. Furze Hill is unquestionably the most promising tin mine in this locality; they have the combined advantage of easy ground and ample waterpower; the present returns of tin are sufficient to meet the ordinary costs, but the erection of additional stamping power involving extra outlay the actual sound condition of the mine is not seen; but when the plant is completed the returns will be increased, and with their present prospects we shall also see this mine in a profitable state. South Ward is the lead mine upon which our hopes are set; legitimately started, and legitimately worked, it has gone on in the even tenor of its way, returning about 15 tons of high-price lead per quarter, and although this quantity has not met the cost the indications at each level have been of such a promising character as to warrant the most thorough prosecution of the mine to a much greater depth than is already obtained; for the district it is but shallow, and should the improvement which has recently taken place in the 60 south and 72 north continue we may reasonably expect that our high opinion of this property will be confirmed. A good mine here is only the precursor of many more; it will create an impetus to further develope the wealth of a district which is unsurpassed in the West of England for the production of lead. Bedford United, after 20 years of prosperity, has been under the shadow of adversity for the past nine or ten years; hard ground and low-priced ore have retarded the progress of this mine, but the development of the south lode, to which attention will be mainly directed for the future, will assuredly reward the shareholders for their patience and outlay; both in the end and the rise in the 47 south there is a fine lode, producing grey native copper; in fact, almost a course of ore. The most competent miners in the neighbourhood speak in unqualified terms of its character. Should the adventurers be fortunate enough to meet with a course of ore in this level, they will have the advantage of easy ground, and consequently increased profits, for the strata are precisely similar to Marquis lode, which upon a very small outlay paid a profit of nearly 60,000*l.* There can be but one opinion as to the value of this sett. There are lodes still unwrought which present equally as favourable appearances as those which have been proved and are now proving, and with the judicious outlay of capital it will be seen that its mineral resources are far from exhausted. Since writing the above we have been told, upon good authority, they drove a fine course of ore, 4 ft. wide, in the 115 west, on the north lode, so there is life in the old mine yet. Equally encouraging reports as those detailed above come to us from Hingston Down, Prince of Wales, Crebor, and smaller mines; so that, upon the whole, we think we may reassure ourselves and the good people of Tavistock that, coincident with the advent of 1874, better times and better circumstances will be our happy experience.—*Tavistock, Nov.* 25. A MINER.

MINE MANAGEMENT—THE FIVE-WEEKS MONTH.

SIR,—The paragraph in last week's Journal entitled "Abolition of the Four-weeks Month" must, I think, have got inserted accidentally, as I think you are too true a friend of the working miner to wish a return to so evil a system as the five-weeks month; but I was well aware, when it was wrung from the agents, a great number would retaliate. As soon as the opportunity occurred they did so, in the case of the Miners' Club. Though myself a Cornishman, and a mine agent for the last 22 years, I regret to state that neither agents nor adventurers progress with the times. Instead of adapting themselves to the times, they try and make the times adapt themselves to them, which they will not do, hence the state our county is in from time to time. Every other trade tries to go ahead, even of the times; it is a neck and neck race as to who shall be first and foremost in the contest. Any part of the world, or even England itself, can entice the best men from Cornwall whenever they are required, simply because our agents cannot break through a rule adopted by our great-grandfathers, and this and other similar ideas have almost depopulated the county. I have no hesitation in stating, from the experience I have had with men, that, give them fair wages, on which they can honestly support their families (and they must have a living from some source or other), and they will give a fair return in labour. Agents and adventurers both err very much in fixing the standard of the gettings too low; it is much better to let men understand that 25*s.* per week is the standard than 17*s.* 6*d.* I have proved that where men know the average wage allowed is below time's value not more than 15*s.* worth of work is done for 17*s.*; but where the average earnings allowed have been a little above the time's value, quite 5*l.* worth of work has been done for 4*l.* In the one case honest working does not bring honest pay, while in the other there is encouragement for labour. If mine agents and adventurers would only put up the average, and really show themselves interested in their workpeople, we should find our mines, as regards the labour part, as economically worked as in any past times. I quote as an instance a circumstance which occurred only a few months since in connection with the mines of which I have the management. I required a piece of work done similar to what had been done about twelve months before, under different owners; the wages allowed by them was 2*s.* 6*d.* per day; for the work in question they gave 3*s.* 6*d.* per fathom. My standard is 4*s.* per day, and the price at which I let it was 3*s.*, and at this latter price as much as 27*s.* 6*d.* per week was earned by some of the men. Every other trade except Cornish mining encourage their workpeople to throw out ideas and suggest means for the improvement of the system in every department, but in Cornish mining everything which does not come from Capts. Dick, Tom, or Bill never sees the light of day. Every other trade will spend thousands, even tens of thousands, in testing the various schemes offered for its improvement; but Cornish mines will not venture 100*l.* to save 50,000*l.* worth of tin going down the Red River. If ye will not carry the men with you in every other respect, uprouse ye agents, look about your mine, and see if there is not a hundred things that you can make some little reduction in, without impairing its efficiency, and which cannot retaliate in sullen silence, as the men can and will do if you force the five-weeks month again upon them. Sixteen years ago, in a mine in the North of England, where we were making 20,000*l.* a year profit, I was asked if I could not reduce the men's wages. I asked to what extent they thought I ought to venture to go; they named it, and I replied that I was quite sure they would lose at least twice that sum in various ways, by the discontent and dissatisfaction that would be engendered; but, I said, "I will, with your permission, make the reduction where there can be no retaliation." In one of the materials supplied for the use of the mines years before I ventured upon it, and was able to make a reduction of 50 per cent., without in the least impairing its efficiency. I am quite sure in many of our large mines, by looking a little more into the material department, thousands a year might be saved. It is a fact beyond controversy that the oftener men are paid the less wages they will work for, and the easier you can get supplied; and this will hold good in Cornish mines, as well as works of any other kind. What gain is there in the five weeks month? Either the men are being paid now too much for their labour (which I do not believe), or else this extra work is wanted out of their blood and bones. I have no hesitation in saying that the relation which exists between the employer and employed in Cornwall is not what it ought to be. It requires the efforts of "One and All" to win the battle. Adventurers, agents, and men must sail in the same boat. Agents, especially, must get down from their high stalking horse and be one with the men. Cornish miners are the most enlightened labouring class existing in any country, taken as a whole, and deserve that every opportunity should not be sought to oppose them. We should carry our sympathies with them, and we should let them feel that in all our efforts towards success they must be one with us, and that agents and men must pull together. And why shall it not be so? Did not nearly the whole of us rise from their ranks, and are there not thousands of Cornish miners as well, or better, qualified to fill the positions we occupy, if there had only been openings for them? It matters little to the adventurers whether the five-weeks month is adopted or not, if we can only utilise at a fair price our miners' labour. But we want to enlist in the development of our mines every faculty of their minds, and in many instances we shall find the faculty of the mind will ensure a better return than the labour of the hands. A mine that the agents cannot see any way of keeping going except by the establishment of the five-weeks month had better go down than it should be again adopted. The return to this old system, instead of relieving, will only add another straw to the camel's back. If it is looked at in the proper light, no more loss can ensue from paying every four weeks than occasionally five weeks. In letting it is as easy to calculate for 13 as for 12. The money you wish to pay in 12 spread over 13, and you will find no discontent; in fact, I believe the men would be better contented, and give better value for their money, if they only received in 13 payments what the agents are willing to allow for 11 than if they received 13 in 12 payments. Mines will not be the least better off by returning to the old system. We pay at the end of every two weeks, and find not the least difficulty in doing so, but a great gain in labour, for we have not an hour's lost time, either for setting or paying, and no play days. From the time wasted on the old system I know my owners save 6*s.* 8*d.* on the labour of every man per month; and then, the standard of wages, combined with the shortness of time between the pays, is such an incentive to the men that they take their bargains at a much lower rate than they otherwise would, and the money you pay is in absolute proportion to the value of the labour performed. Let me urge upon adventurers and agents not to return to the old system of the five-weeks month, but to make the present four weeks system subservient to the best interest of mining, as it can be. And let everyone feel all our interests are in the same direction, and success will yet more abundantly smile on our mines and our miners.—*Parr, Nov.* 26. C. P.

THE "ORIGINAL CORRESPONDENCE" IN THE "MINING JOURNAL."

SIR,—Your correspondent, Mr. B. R. Smith, M.E., gives us a good common-sense view of the Sandwell Park trial sinking. We have all along held a very favourable opinion of this trial, and expect to see it successful. We are sorry to say that we cannot read the next letter, "American Mining—Why so Depressed?" with so much satisfaction, although "Observer" seems to put the question fairly; R.N.S, American mining experts, or British M.P.s are not the men "to put matters to rights" in mining matters, unless absorbing all the capital may be regarded as such. How long before English capitalists will learn that to conduct mining operations properly requires practical and scientific training more than any other pursuit, mining being the most abstruse of all the sciences? Mr. Longmaid gives us some reasons as to the cause of failure in American mining, but we would value his letter more if he had left out the paragraph which he gives on doubtful authority, and had said nothing as "say the Americans," who are certainly interested in getting us "to credit American statements." Mr. James White gives us a good letter on "Mining in Mexico." We believe that this is one of the richest mineral countries in the world; but they must obtain a more permanent Government before it will be worth our while to go mining there. Had poor Maximilian got through his difficulties many mines would have been wrought, to the benefit of the country, and to the benefit of those who supplied the capital. We would much rather embark in Mexican than North American mining, if the former country had any Government worth naming, but as it is we shall not send our money there.

"Miner" talks of "ore reduction by mine adventurers." There are many reasons why this would be inconvenient. Mines are carried on, in the county of Cornwall especially, without capital—that is, you do not keep any capital in hand. When this is the case you sell your produce in the first market, or must call upon the shareholders. All who venture in mines go in for great discoveries, and not for regular business. The percentage of profit which satisfies the smelter does not satisfy the miner—hence, if the mine is successful the difference is a mere bagatelle; while, if the mine is not successful, the profit on ore reduction would be quite as readily swallowed up in the general loss, and the cost of smelting establishments into the bargain. It may be argued that mines ought not to be carried on without capital, and perhaps that may be correct in the abstract; but we have witnessed this day a meeting where the managers were on the point of being ousted, for no other reason than they had 3000*l.* or 4000*l.* in hand, which would have enabled the incoming parties to have declared a dividend at once, and to have obtained all the credit of dividing money earned by the parties attempted to be ousted. Is it politic, therefore, for those having the management of mines to keep any capital in hand, and without doing so we cannot go in for smelting? Mr. Spargo's letter on "Mining, and its Prospects" we leave until we see his ulterior object in addressing you on that subject, nothing in this communication calling for especial remark. "Miners' Conversations" still go on. Capt. Richard Pryor, again! We wonder how many columns of the Journal will be devoted to this gentleman's laudation; his friends are certainly very zealous in his praise. We hope that some of his mines will turn up trumps after all this. Mr. E. J. Bartlett writes with some ability on "Causes of Mines and Mining Depression," but we fear that his "causes" are only the result of other and deeper causes. We think that the high prices of all material, and the depressed price of mineral produce, would reckon among the causes, and that some of what he calls causes would soon disappear with a change in those prices.

We are sorry that Mr. Robert Knapp has not in his letter even mentioned granite or fossils, except the latter flippantly. We hope, however, to see a letter from him next week on the subject. Mr. Ennor, as usual, writes a long letter; we would think him more consistent if he took some of the many tin streams on the Red River and elsewhere now to let, and showed us how to save all this marvellous quantity of tin he estimates as running to the sea. Mr. M. W. Bawden gives some valuable information with regard to silver in copper ores, which we believe to be correct, from some personal experience in the matter. Yet if people estimate all the lode in any case as containing silver to any similar extent as found in the copper ore they will be deceived, that being only a portion of the lode. "A Member of the Mining Association" fires a volley all round, like our allies now fighting the Ashantees. We hope that some of his slugs will reach their destination, but fear that both Mr. Ennor and Mr. Secretary Bruce are too thick-skinned for them to penetrate. Mr. George Sparke makes some good remarks as to the result of strikes, but we do not see our way clear out of the complications arising from this cause. Mr. Alfred Harper fights on *re* "Fron Vellan Mine," but we do not know the right or wrong of this affair, and have no further remarks to make. "One who Knows the Property Well" tries to promote North Metal and Harriet, and "A Shareholder" gives another puff to Fortescue Mine; we say sell the tin. "Observer" critises poor Barnard, but we do not suppose he will stop writing bunkum while he has ink in his bottle.

If "Another Victim" would gives us particulars of the abuses he names, and name mine, &c., we would thank him, but cannot do so now, as he has excited our curiosity, and not satisfied it. Mr. Nathan Jones has entered upon our particular vocation very cleverly, and we rejoice to see younger and abler heads and hands ready to take up our failing weapons when the fight is over, and our work is done. Some of Mr. Jones's remarks are good, while some others, especially those referring to the "Miners' Association," are not such as we altogether approve. We believe this association has conferred, and is still conferring, a vast amount of benefit on the mining youth. We hope next year to see Mr. Jones's name as a subscriber. READERS OF THE MINING JOURNAL.

WEST WHEAL SETON.

SIR,—I am much gratified to learn that Capt. W. Teague's motions, submitted to a meeting of the company yesterday, were defeated. The first was to appoint a committee of finance during the purser's illness, and the other to dismiss all the agents, with thanks for their services! Having carried motions of similar import at Wheal Seton, Capt. Teague calculated that he might do the like in West Seton. Not so, however. Mr. Lanyon and others, like reasonable men, protested against resolutions to discharge officers who had done so well as these have done. It is gratifying to find that adventurers in general are opposed to arbitrary proceedings such as Captain Teague's. This defeat may teach Captain Teague a lesson against covetousness, which is apparent in the attempt to eject men that he might fill their places. No doubt he expected to be appointed both manager and purser of the mine. I believe that Capt. Teague is receding from the acme of his glory. It may be said by-and-bye (perhaps) "How are the mighty fallen!" I wish him well, so long as he tries to do well.—*Pool, Nov.* 27. OBSERVER.

FORTESCUE TIN MINE.

SIR,—Nothing can well be conceived more illogical or unsatisfactory than the reason put forward by the managing director and other correspondents in the Journal of Nov. 15 for withholding the reports, which used to appear with such regularity during the early part of the present year. If evil disposed persons have been, as it is alleged, endeavouring to depreciate the mine for their own selfish purposes, what better corrective could be devised than that of keeping the shareholders duly informed of its progress in opening out the valuable deposits of tin said to be scattered in such rich abundance in all directions. This suggestion, of course, assumes that the predictions of success persistently made from the beginning have been, and still are, justified by the past working and present indications below the surface. To withhold under such circumstances the publication of reports can only be regarded as a most mistaken and suicidal policy. Its certain effect must be to strength the enemy's hand, by creating distrust and misgivings in the minds of shareholders generally, with the natural result also of making their property unsaleable, except at a heavy discount.

The question, however, may be asked—Is it quite fair to hold up scheming brokers and greedy speculators, who, no doubt, for many cases are great offenders, as responsible for the present low quotations, and to overlook the action of the board of directors, who in their circular of Aug. 1 offered the unallotted shares, more than 6000 in number, at the startling price of 10*s.* each? It is not denied by me that the necessities of the mine, from a financial point of view, may have become so urgent as to justify this enormous sacrifice, though it would be somewhat difficult to reconcile such a position with previous statements. In any case it cannot be doubted that an extreme measure like this, so suggestive of weakness, must have affected most prejudicially the market value of the shares already issued, by either reducing them to their present quotations, or preventing them from attaining a higher figure.

It has been suggested, with what degree of truth or probability I cannot pretend to say, that of the 6000 and odd shares so offered but a comparatively small proportion was actually subscribed for. I sincerely hope there is no real foundation for such a supposition, because of its utter variance with the concluding paragraph of the circular, to the effect that offers had then been made for the whole of the issue on the proposed terms. The company's accounts no doubt will furnish a conclusive answer on this point, but it might be thought worth while to set the public mind at rest by an admission or unqualified contradiction of the rumour. What at present most concerns the shareholders' interests is the question of the intrinsic value of the mine.

Vague statements of rich discoveries every now and then find their way into the columns of the Journal under the heading of "Mining Notabilia," being, in fact, the contributions of mere correspondents. From their unofficial character representations of this sort carry but little weigh, and to whatever mine they apply the credence given to them is very limited. But it should be remembered also that statements having a more authoritative stamp, and pointedly encouraging the expectation of early and large dividends, have, as regards the Fortescue, been freely circulated. I greatly mistake if, as the result of long months of waiting, the sale of 6 or 8 tons of tin will be accepted as a satisfactory fulfilment of the company's predicted prosperity, even as a first instalment. We had been led to believe that the past summer would place us in a dividend-paying state, but no sign of such a happy consummation has yet been afforded us. It remains now to be seen whether the receipts are exceeding, or even balancing, the expenditure; and shareholders need scarcely be reminded that there may be a wide interval between the mere avoidance of debt and the declaration of a dividend.

Nov. 25. A DISSATISFIED SHAREHOLDER.

FORTESCUE TIN MINE.

SIR,—In the Supplements to last and the previous week's Journals were inserted four letters respecting the above mine, three of which, by a stretch of the imagination, were supposed to account for the silence of the agents. One kind correspondent says if the Secretary had been written to he would have given the necessary information. I wrote to that gentleman, who did not even answer my letter. Respecting the wisdom of withholding reports to counteract the evil doings of wicked brokers and ill-disposed persons, I think, with "Shareholder," it is not satisfactory. I am of opinion that the reason the reports have been withheld has yet to be told. If there were more truth and daylight about mine management there would be much less cause for "wicked surmises" than there are at present. I hope that by calling notice to the want of attention of the Fortescue mine managers in your valuable Journal it will produce a regular weekly statement of facts.

A SUFFERER.

FORTESCUE TIN MINE.

SIR,—Much has been said by the agents of this mine in their reports and otherwise of the rich lodes discovered and now being worked upon, and the shareholders necessarily and anxiously look for something like a confirmation and fulfilment of these statements in the shape of returns, but up to the present time they have been doomed to disappointment, and are beginning to feel a little uneasy over the matter. About Midsummer of 1872 Mr. James, the managing director, promised to erect the necessary engine and stamping machinery, and to get tin in the market by Christmas of same year, and at a cost of about 5000*l.* But it turns out that nearly 15,000*l.* has been expended, and it will be Christmas, 1873, before tin will be in the market. Over six months ago Mr. James, at a meeting in London, stated that they had over 4000*l.* worth of tinstuff, since which the agents have reported almost weekly on the value of the lodes, varying from 10*l.* up to 50*l.* per fathom. Surely in the six months 2000*l.* worth of tinstuff more should be in stock according to the valuation of the lodes, making a total of 6000*l.* About two months ago the agent reported that as soon as the calciner was in readiness they would then have 10 tons of tin ready for the market, and that this quantity would be about the average monthly returns with the present number of heads. Unfortunately, however, it is said that not more than 4 tons of tin will be sold by the end of December next. Can this be the result of the whole of the stuff accumulated? Out of the 24 heads of stamps recently erected there have not, it is reported, been stuff to keep 12 heads constantly employed, although a writer in last week's Journal stated that they should erect 60 heads more. I would ask where is the stuff to come from to supply them? It is quite out of the question of supplying 84 heads when you cannot supply 12. Mr. James and his two supporters attributes the depreciation in the price of shares to the wicked brokers, but I think the true reason will be found elsewhere. The reports and statements put forward have not been accepted as true versions of the state of affairs, and the results have justified the conclusion; a want of confidence in the present management has also done its work. Has not a great practical error been perpetrated in the starting and very partial development of the mine? I am informed that the dressing-floors are to be laid out on a very extensive scale. It is certainly desirable to have good dressing-floors, but it is also very desirable to have tin to dress. JUSTICE.

NEW GREAT CONSOLS.

SIR,—I have noticed the paragraph in last week's Journal intimating the proposed amalgamation of New Great Consols and West Great Consols, both of which are situated in the neighbourhood of this town. I have also heard some news today of a very cheering character; it is to the effect that Holmbush, Kelly Bray, and East Holmbush Mines are about to be re-worked together by a powerful company, with an ample subscribed capital. I have no doubt that under good management, like that of New Great Consols, these mines will pay well. The rich tin lode in New Great Consols is said to pass this Holmbush and the other mines named, so that the prospects of success are extraordinarily good. A MINER.

Callington, Nov. 26.

NEW FOWEY CONSOLS.

SIR,—Mr. W. Kendall, reporting on this mine on Nov. 17, values the Wheal Prosper lode for 23 fms. in length at 2 cwts. of tin to the ton of stuff. He also values the middle lode at 2 cwts. to the ton. If this be really true, they have the richest mine ever discovered. The average of Dolcoath is only 40 lbs. of tin to the ton. The report says that the Wheal Prosper lode east of the stope is very rich both for tin and copper—"Copper ore on the hanging or north wall, and tin on the foot or south wall, and some as fine rocks of tin and copper ore taken out of this lode as I ever saw." Then comes the remark—"A more promising lode cannot be seen." This seems to be a very tame expression indeed for a lode yielding 224 lbs. to the ton The writer certainly would appear to have forgotten his cue, and had inadvertently spoken the truth. Who is this Mr. Kendall? TRUTH.

CASTLE AN DINAS MINING COMPANY.

SIR,—Mr. W. J. Thompson last week issued a circular to the shareholders of this company, asking them to join in a syndicate, so as to form a new company, otherwise they will lose every shilling of their property in the old. A mortgagee, to whom the company owed 1919*l.*, has sold the mine, and Mr. Thompson has bought it for 295*l.* It seems to me, Sir, that upwards of 1000*l.* of assets should be previously distributed *pro rata* to the shareholders—at least to all who dissent from such a reconstruction. Yet Mr. Thompson writes in the following terms:—"I may here mention that those shareholders who do not join in the syndicate must be entirely shut out from any interest whatever in the new company, as the property has been sold away from the late company." Sold away! Is that legal?

A SHAREHOLDER.

FRON VELLAN MINE, MONTGOMERYSHIRE.

SIR,—I see Mr. "Pedestrian's" eloquence has not yet failed him: but what has he to do with the Fron Vellan Mine? My suggestions were for the directors. All I wish to know is, what became of the large masses of ore discovered in this mine? admitting it to be half what has been reported in the Journal. The deep adit level intersected the lode at 70 fms. deep, courses of ore discovered producing 2 tons to the fathom in ground unwrought up to surface. What splendid discoveries, which, as a matter of course, enhanced the value of the property very much indeed. Such prospects would induce any persons who were fortunate enough to own a few hundreds of pounds to embark in such a *bona fide* concern, believing, as I did, that the ore should be made marketable in a very short time. But, alas! instead of sending the ore to market we find to our surprise that they are engaged in sinking a winze below deep adit. I shall leave the public to draw what inference they please from such management, but, as sure as I am interested, I shall investigate the matter thoroughly before I am done with it. If there is such ore as reported in the lode there is ground enough laid open above the deep adit for stoping for seven years, allowing 10 fms. of the backs to be taken away every year, and what prevents to stope and sink at the same time? They may in that manner open out a section of ore ground below the deep adit, while working away the section ready opened above the same. Why should call after call be made on the shareholders while there is sufficient ore discovered to render profits? INTERESTED.

WHEAL LUCY (HAYLE) CORNWALL.

SIR,—This mine, that bid so fair for making a good bal two years since, is numbered among the many untried mines in the county, and all the machinery and materials have been sold by private and public auction for the sum of 913*l.* 4*s.* There has been called up 6750*l.*; black tin sold, about 1330*l.*; and the deepest point the lodes have been wrought on is not more than 18 fms. from surface. There are but few mines in the county that have produced more tin to the amount of lode taken away than this mine. But, unfortunately, a hard bed of blue elvan came in and disordered the lodes. Then all operations were suspended on the course of the lodes, so as to sink the engine-shaft, which would strike the lode in about 24 fms. deeper; but cross-cuts were started from the bottom of the shaft towards the lodes, which would be 10 fms. deeper than the lodes had hitherto been seen. But before reaching the lodes the mine stopped for want of capital to further develope this more than ordinary speculation.

I would here remark that in the last 6 ft. sunk at the shaft the ground is so much changed for the better that it could be sunk for 50 per cent. less than before, which speaks well for the lodes being productive in such congenial strata. What a pity to stop before seeing the lodes. There is the east shaft, which is sunk 9 fms. from surface on a counter lode which has yielded tin enough to pay for the sinking of the shaft, and the lode is as rich for tin now as when it was being sunk. This lode will intersect all the other lodes, where might reasonably be expected productive ground at the intersections.

The plan, section, and cross-sections can be seen at the office of Mr. John Hitchins, Cornhill, or at the mine. Here is a fine field for capitalists, instead of working deep and inexpensive mines, when not a doubt a very early date it would well pay for the small outlay required to develope it when compared with mining generally.

MINER.

TREGOSS COMMON TIN MINE.

SIR,—This mine is situate in the vicinity of Wheal Mary Tin Mine, where the stamps were lately set to work, and a splendid yield of tin produced. The Tregoss Common adjoins the boundary of Wheal Tregoss Mine, where the stamps are being fully supplied with rich tin stuff, good returns being the result. The Wheal Tregoss runs through the Tregoss Common sett. Mining in this district has been anything but active of late, and has not been brightened by the drop in the tin standards; however, this is a dull season, but ere long it will be brightened by large returns of tin, and active business will result. After the long vacation the Tregoss Common will be initiated with others in the district as soon as stamping machinery is erected. As there is a tin-bearing elvan 18 ft. wide, as well as other lodes and cross courses laid open at the surface, and been proved by costeaning and shallow sinking, the present proprietors are seeking assistance from other capitalists to erect the necessary machinery. The most gratifying accounts of the prospects and condition of this most valuable property which have been attained in opening up these lodes, &c., at a shallow depth, show that a small capital only is required to erect the machinery to bring the mine into a paying condition. The ground is easy for exploring, and very congenial for tin, and is situate at the head of the celebrated Goss Moors, where many a fortune has been made by tin streaming. This is a good indication of finding a rich mine on the lodes further to hill than where the tin streaming was found. I do not hesitate to say, from all appearances, that this mine will open up rich for tin on being properly developed, and depth attained. The lodes are fully opened up, so as to justify and guarantee the

erection of stamping power. It is now hoped that other capitalists will join the present proprietors, and reap an abundant harvest for all seeds sown. Indeed, I am sanguine such will be the case with moderate capital and judicious management.—*Roche, St. Austell, Nov.* 26. SAMUEL R. COCKS.

LLANRWST MINE.

SIR,—I have just returned from a tour in North Wales, and while there visited this mine, my attention having been called thereto by the advertisements that have appeared in your valuable Journal, in one of which it was stated that about 100 tons of lead was at surface and that the prospects of large returns were good. Had this statement been borne out by fact I should have been glad to have invested in the property, but to my great surprise I found that the agents in the neighbourhood did not value the pile of lead at surface at 20 tons. I should like to ask the promoters where the lead is to be seen, and whether they mean that the piles of debris that appear to have recently undergone some change are intended to represent the 100 tons of lead? I was some time ago induced to invest in a mine in Wales, where it was represented that there were 200 tons of lead at surface; results proved, however, when it came to be dressed and prepared for market that there were not more than about 10 or 12 tons in the large pile said to contain 200 tons. I shall be glad to find that I am misinformed as to the quantity of ore now at surface at Llanrwst Mine, and that the statements made in the prospectus are likely to be borne out by results. PEDESTRIAN.

"FALSE QUOTATIONS," &c.

SIR,—The letter in the Supplement to last week's Journal, by Mr. E. J. Bartlett, calls attention, among other things, to one that cannot fail to awaken a responsive echo in the hearts of hundreds of that numerous and incessantly victimised class described as "country shareholders." I am myself the holder of shares in several mines, some of which are perfectly unsaleable at any price, and the rest only at, perhaps, half of what I was induced to buy them at long ago. In one, and that where the management was considered all that could be desired, the immediate prospect is complete stoppage, all subscribed capital being expended, and there being no chance of raising more; while in another I have had to pay several calls instead of receiving promised dividends. Again and again I have tried to effect a sale, and through the same kind friends by whose advice I was governed in purchasing, but, hitherto, in vain, and yet every week these shares are quoted under the head of "business done," and at prices infinitely higher than I should be only too glad to sell mine for, and every month I find these same gentlemen (?) in their Circulars pressing the claims of these mines upon the attention of the public, and employing all the arguments possible to incite investors to buy the shares at prices which they know never will be realised back again by the unfortunate dupes who, believing them to be men of integrity and common honesty, are guided by their counsel. As they of whom I have had experience belong to the superior class I know not what the rank and file are like; but could not "victims" discover some means by which they could supply each other with the names of the mining agents at whose hands they have suffered, or whose character has been certified by experience as trustworthy? COUNTRY SHAREHOLDER.

TECOMA MINING COMPANY.

SIR,—The unprecedented fall in the value of shares in the Tecoma Mines, from 10*l.* to 17*s.* 6*d.*, their present market price, requires explanation from the directors of that company. It seems hardly possible that a mine which some six months back was represented to be worth 300,000*l.*, and which has never yet sold a parcel of ore, should now have become, so to speak, valueless. I think it is a duty which the directors, as honourable men, owe to the shareholders to call them together at once, and place before them the real cause of the enormous depreciation in the value of their property. If the directors will not convene a meeting of the shareholders, then let the shareholders sign a requisition to compel them to do so.
London, Nov. 27. A HOLDER AT £10.

ENGLISH MINING—PRESENT AND FUTURE.

SIR,—Surely your readers can now hardly fail to detect the real character of "Observer;" he has not even the pluck to come forward and assist in settling an argument; but in reply to my challenge declines to accept it, and, like the coward that he is, refuses to measure swords simply because someone else has given me a thrashing in the past. This is hardly the old English style of doing business. How coolly he refers to the disastrous failures when Barnard made his *début*, a truism which cannot be denied, but I would remind him that some of our most distinguished men, who by their deeds and actions have done the world untold good, did not achieve their success and glory without having had first to encounter several ignominious defeats and failures; indeed, many of the greatest orators of the day have made a miserable hash of their maiden speeches, and been hooted and hissed off the platform, but still by continued perseverance have step by step mounted the ladder towards popular applause. No one has studied the character of friend Barnard more than myself, and I happen to know that gibes and jeers will only strengthen him in his motives to make the world confess that he has turned mining from an excruciating agony into a voluptous luxury; he is not naturally conceited, neither is he revengeful, and very possibly when eulogies are falling in heavy showers his retiring and modest nature will not permit him to acknowledge them as a debt justly due; but now in the thickest of the fight, when results are doubted, it is a glory to raise the war cry and predict the future. The name of Barnard is familiar throughout the mining world for his lamentable failures, empty words, and poor deeds. So far so good, or so bad; but what if the failures are turned into gigantic triumphs?

First of all it is necessary to prove for an absolute certainty that silver actually exists in England. I have said that the lodes in this district average 6 ozs. to the ton, and "Observer" quite fairly is allowed his say: whether he ever reaches himself in trying to show that I am endeavouring to gull the public is not the present matter of discussion. Now, it so happens that at an opportune moment Mr. M. W. Bawden, assayer, of Liskeard, who is a pefect stranger to me—I have never even seen him—gives information that all the known lodes from Marke Valley to Devon Consols, a distance of 18 miles, averages 6 ozs. of silver per ton. This surely should at once settle the matter, or at least cause rigid enquiries to be instituted to prove if Mr. Bawden be correct or otherwise; no doubt if he had not signed his name "Observer," someone else would have put him down as a maniac, or one of the Barnardian disciples of rhapsody. I question, now, if some of his friends are not axious as to the present state of his mind. Again, on Nov. 8, Mr. F. R. Reeves, of the Belstone Mining Company, laid claim for the Belstone Mine as yielding 6 ozs. of silver per ton of ore sampled, when he is at once attacked and told that the ore sampled giving 6 ozs. was no criterion of the lode averaging the same; it is quite enough at present for me to fight my own battles, but *en passant* will hint that Sticklepath (Belstone Mine) is some three miles from Okehampton, or 24 miles from the Devon Consols, and that the great lode of 100 ft. in width mentioned by Mr. Reeves averages 9 ozs. of silver. I know the mine as well as he does, and permit me to raise my hat in imagination, and in all politeness inform him that I have even a better knowledge of its silver qualifications. The ore sampled giving only 6 ozs. is a decided mistake, it will yield 10 to 16 ozs. per ton of ore. Nay, there is no grinning behind a tree with me; send a sample of the next parcel to Captain W. Knott and Mr. Bawden. I am getting disgusted with this silver assaying business, as I happen to know the secret of success and failure, and that some assayers kill the largest portion of the silver by a radically wrong treatment. At Sticklepath we are well on the road to Exeter, but let me take a jump down to the Land's End, and go wherever we will in Devon or Cornwall we have only to find a real healthy lode to also discover, as a matter of course, that the mineralised composition contains from 4 to 10 ozs. of silver, which, to be on the safe side, I calculate as an average of 6 ozs.; this is a value of 30*s.*, and surely a man deserves assistance rather than insults for taxing his brains to discover some means for its profitable extraction.

Learned *savans* can with impunity write pure logic, and tell us how many tons of coal there are in the earth, and how long they will last. I anticipate many sneers, but by the same rule maintain that there are thousands and tens of thousands of tons of pure silver disseminated through our mining districts; and, egad, I mean to unearth a few of them, and have joyful anticipations of some little portion coming to my share. We know the value of silver, and the vital and all important question now remaining is the cost of extraction. It is not prudent to disclose the whole of one's secrets to receive in exchange either sharp shooting or insults, or abject apathy, unbelief, and indifference; but having discovered that silver in our mining districts is as plentiful as salt in the sea, and has been unrecognised for ages, I have also, after months of hard work, solved the problem of turning the hitherto valueless and unmerchantable article into a great source of wealth for the benefit of mining generally, and, like any other ordinary man of business, have taken the precaution to patent the result of arduous labours. Last week I called myself a Quack, but if any man in England has ever had real practical experience in operating upon low-class silver ores it is the writer; nothing has escaped my notice, simply because it has been almost a race for dear life. Every word of my writings of some two years since welled forth from the heart, but I had then too much faith in the abilities and industry of others, and too little conceit in myself; but when a man has lost fortune, home, position, and worse than all, his good name, and is thrown upon the world with nothing but his wits, then is the time for real practical strides to be made in any pursuit presenting a fair field for success when brains and energy happen to be a greater acquisition for the cause than money. It may require the language of symbols to make a good talking chemist, but my efforts for the past nine months have savoured very little of theory; it has been one round of practical experiments, and having almost exhausted every available scheme, and all the known chemicals likely to give *the best with the cheapest* results, I am in a position to achieve what mortal man has never done before—turn the bulk of our poor mines into rich ores; no alchemist ever studied his business with greater zeal and interest; but I have had the real substance and not a shadow to work upon, as the silver is in the material, and the only secret is getting it out to profit; that even 8 ozs. of silver in a ton of stuff cannot be extracted with any commercial advantage by fire, or the ordinary means of mercury. Hyposulphites, hot brine, or hydrochloric acid, ideas may surely be evidenced by the silver existing where it now is, and has been for ages; therefore my patent will rest entirely upon its merits, and if I can really turn poor mines into sources of wealth, perhaps some kind philanthropist will move a resolution that the odium upon my cognomen be entirely removed. I shall be in a position shortly to treat with the representatives of mines for converting poor bals into rich properties, the charges will not be heavy, and the system of payment liberal, under the principle of no song no supper. One word more. "Observer" thinks to annihilate his victim by quoting one or two statements respecting the Virtuous Lady. For instance, I once said that the mine was capable of returning 500 ozs. silver per day; perhaps he would like to see this remark withdrawn. God forbid. I reiterate with greater vehemence than ever all that I have said of that truly wonderful mine. The property is out of my hands; but there is no disputing the fact that the mine boasts of one of its many lodes being 200 ft. wide, averaging 7 ozs. of silver per ton. I wonder if "Observer" is well up in the rule of three, here is something to employ his past time. Take such a lode only 100 fms. in length, and 100 fms. in depth, turning out (say) 10 tons per cubic fathom, required to know the number of ounces of silver at 7 ozs. per ton. Disputing the actual existence of the silver is childish, absurd; he may as well come forward and deny that there are millions of tons of salt in the ocean water. Let him go in for practical experiments, as I have done; no flinching. I propose he operates upon four quarts of sea water, evaporating two quarts, and swallowing the remaining portion, he will then find that salt is no fable, and has not lost its savour; just the same with silver. Yes; there it is, millions upon millions of pounds worth in the Virtuous Lady Mine, and there it has rested for ages, and will for ever exist in its present form until science, perseverance, ambition, and plodding brains are brought to bear upon its removal to profit, and that day is now near at hand. When I again forget the text, perhaps the all observant "Observer" will give me another reminder.
4, Abbey Mount, Tavistock, Nov. 24. THOS. J. BARNARD.

[For remainder of Original Correspondence, see to-day's Journal.]

Meetings of Public Companies.

CLIFTON SILVER MINING COMPANY.

A general meeting of shareholders was held at the offices, Great Winchester-street, on Monday,

Mr. COOPE DAVIS in the chair.

Mr. F. ANDREWS (the secretary) read the notice convening the meeting. The report of the directors (which has already appeared in the Journal) was taken as read.

The CHAIRMAN said, as one of the original directors and shareholders, he most fully sympathised with his fellow-proprietors in the non-success of the mine up to the present time. He asked the shareholders to appreciate the very great difficulties the directors had had to contend with when a manager disappointed them, and how utterly helpless they were under such circumstances until matters could be rectified. They had no explanation as to Mr. M'Cree's conduct—it was perfectly incomprehensible. When he left he appeared fully alive to the responsibility attaching to him, and to all appearances seemed greatly interested in the success of the mine. As to the position and prospects of the mine, he could not do better than read extracts from the letters of Mr. Ramage and Mr. Sawyer, received since the report was issued.

Mr. RAMAGE in his letter to the board, dated September 10, says:—"I have this day gone all over the portion of the Clifton Mine on the east side of the mountain in company with Mr. Sawyer, and am happy to be able to state to you that with my most sanguine expectations I have never held so high an opinion of the mine as I do at present." In the same letter he says:—"The mine will now pay its way, but we want profits, and must get more openings and more men to work;" also that there was no "difficulty in selling all the ore we can get of the quality quoted."

In a letter dated Oct. 18 he says:—"With regard to making the mine self-supporting, I consider it now and ever since the mine was placed in charge of Mr. Sawyer self-supporting, but we want more, we want to pay dividends, and that cannot be done with the few men now at work. I have advised Mr. Sawyer, and will now do so stronger, to the effect that the company is not to be involved in any debt. I believe, however, this is much his own view."

Mr. SAWYER says in his letter of Oct. 18, that "If Collom treats our ores successfully, we can produce within a very short time a sufficient quantity to supply his or similar works all the time to their full capacity. I have now one man stoping in first level, West Clifton main shaft, and with what is produced by one man's labour driving the level, I can break 4 tons per day of good pay; the vein averages from 2 to 5 ft. wide of pay."

In his letter of Oct. 25 he says, "On the 22nd I finished hauling to Collom what ore I had taken out of the 100 ft. level, Clifton main shaft; there were 27 loads—say, between 50 and 60 tons of this—which I consider far superior to any ore found on the dumps left by Dowlen or McCree; we have now at his works about 150 tons. Now, if we shall not be able to realise anything from this ore before spring, what with past indebtedness all of the 500*l.* you mention as having remitted to me will be consumed, and if there is to be no more money remitted I see no way only to shut the mine down and await your further orders. In conclusion, I will say that the mine never looked so well as it does to-day. As I have stated before, on the 22nd inst. I hauled away to Collom's all the ore that I had produced up to that date from the 100 ft. level, Clifton's main shaft. To-day there is on the platform, which I have taken out since that time, 22 tons of good pay ore; most of this was produced by one man's labour, in the stope where we have a vein of pay from 3 to 5 in. wide, consisting of gray copper, galena and copper, and iron pyrites, which looks better than any ore the mine has ever produced."

In his letters of Nov. 4 and 5 he reports that the 150 tons of ore had been dressed by Collom: 46½ tons from 100 ft. level Clifton shaft and 34 tons from Clifton main tunnel had produced mineral which looked splendid: 52¼ tons taken from the dump had not produced nearly such good mineral. There appears to be about 20 tons of dressed stuff, which is now being hauled to the Spanish Bar Smelting Works for sale. Valuation of ore raised in October, $1867·50; month's expenses, $1281·40; leaving $586·10.

The CHAIRMAN added that there had been several changes in the board of direction, which had been quite accidental, and not at all due to the state of the company's affairs, and they were indebted to Capt. Keir and Mr. Marshall for having come to their assistance. He then noticed the leading items in the balance-sheet, stating that the amount due upon the share account would be paid in due course. As to the directors' fees of 261*l.*, he stated that Gen. Barwell retired upon an appointment in India, and applied for his fees, and Mr. Ramage before he left for Colorado also applied for his fees; but, at a meeting shortly afterwards, before the end of the current year, it was resolved that a cheque should be written for the directors' fees, which was done. As to his own (the Chairman's) he felt that in the present position of the company he was not justified in receiving any remuneration, and, therefore, waived his claim, reducing the amount paid to 217*l.* 7*s.* Mr. Andrews, the secretary, had performed his duties since June without remuneration; and for the next year the directors had resolved not to take any remuneration while the secretary had agreed not to receive any salary, the only London expenses being office rent and clerk's salary, which might be put down at 150*l.* a year. He mentioned the board had resolved that the latest advices should be exhibited in the office. He then moved that the report and balance-sheet be received and adopted.——Capt. KEIR seconded the proposition.

A SHAREHOLDER asked what was the policy of the board?——The CHAIRMAN: Simply do nothing. They had about 700*l.*, including the amount due on share account. The board had written out to say that no more money could be expected from this side; but the letter received this morning was of a most satisfactory character as to the treatment of the ore. He did not think, however, they could do much before the spring; but as soon as they heard what the ores realised they would communicate with the shareholders. If what Mr. Ramage states proves correct, the mine will, no doubt, be a good one; but at present there was nothing to be done, except to shut it up and re-open it in the spring. In the meantime, they might consider it advisable to raise more money. Mr. Sawyer was a man who understood his business, and would work the mine to advantage if it could be worked, and in the spring they would know whether there was a mine or not. If there were an open winter they would be able to send ore to Collom's works, and thus get on very well.——The report was received and adopted.

Messrs. Davis, Ramage, Marshall, and Capt. Kier were re-elected directors. The auditors were re-elected.

A vote of thanks to the Chairman and directors closed the proceedings.

ANGLO-AUSTRALIAN MINING COMPANY.

An extraordinary general meeting of shareholders was held at the offices, Austinfriars, on Wednesday, for the purpose of considering the present position of the company, and for passing such resolution or resolutions as may be determined upon.

Mr. WINGROVE in the chair.

The notice convening the meeting was read.

The CHAIRMAN said that a circular letter, dated Oct. 14, was forwarded to shareholders inviting subscriptions to a mortgage charge for 5000*l.*, to bear a 10 per cent. interest, and redeemable in five years, and stating that with the exception of 1000*l.* to pay off the existing debts the whole of the sum would be appropriated to the development of the mine. To that circular a report by Mr. Lamb was annexed, showing the then position of the mine, and the directors had hoped that it embraced sufficiently encouraging features to induce shareholders to come forward in the present emergency to make an effort to save their property. He was sorry to add, however, that, with the exception of three gentlemen only, who had always been very staunch friends and supporters of the company, no response was made to that circular, and those three offers were wisely made conditional upon directors succeeding in raising the entire sum. Therefore, that scheme had entirely fallen through, although the directors would possibly have come forward had the subscriptions been larger. The last advices received were of a much more encouraging character (they appear among the foreign mines in another column). The change that had taken place in the character of the ground coming in from the west was a very satisfactory feature, indicating they were approaching the main lode. They had also been sinking a prospecting shaft, but had been obliged to suspend operations there because the funds were drawing to so small an amount; they had, however, let on tribute a small leader at 40 per cent.; the tributers had raised 5 tons, with a yield of 5 dwts. per ton; and, according to appearances, it was calculated the stone would pay. The prospecting shaft was placed upon the same channel of ground as that in which the adjoining company was obtaining such satisfactory results, and according to the "dip" it must come into their property. The mining captain had had an opportunity of inspecting this adjoining property, and they had before them the fact that on their immediate boundary there were indications of a fairly payable lode, so that there was every reason to confidently believe that they would do as well as their neighbours on either side of them when they had sunk about 40 feet deeper. Mr. Lamb, before he left the colony, having exhausted all the funds at his disposal, raised by a bill, which would fall due two months hence, the sum of 750*l.*, so as to keep the works going upon a moderate scale, and to preserve the title. The directors have to-day propounded a scheme (which would be submitted by circular to the shareholders) which he thought embraced features likely to encourage subscriptions. He then proposed—

"That the directors be requested and authorised to invite subscriptions from the shareholders of the company to a loan payable by 12 monthly instalments of 6*d* per share by each shareholder in respect of the whole or any number of shares held by him to be secured by a first charge on the property of the company, and to be repaid with interest on or before June 1, 1876, and to bear interest at the rate of 20 per cent. per annum. Any subscriber whose aggregate payments amounts to 2*l.* 10*s.* to be at liberty to exchange the same for a fully paid-up share, or for so many paid shares at par as an equivalent to the amount paid by him. On non-payment of any monthly instalments, all former payments and interest in respect thereof to be absolutely forfeited to the company, with power to directors to rescind such forfeiture. If any shares remain upon which such subscription shall not be paid, any other shareholder or other person shall be at liberty to subscribe the amount payable on such shares on the same terms as the holder thereof. That the directors do take and do execute all necessary steps, acts, documents, and proceedings for carrying out and giving effect to the above resolution, or such modification as they may deem necessary."

The CHAIRMAN said he thought that scheme would meet with general favour; the more especially as the machinery and plant would realise sufficient to recoup the subscribers to the loan; on the other hand, a holder of 500 shares could subscribe upon 200 or any number he chose. Failing the success of this scheme, he saw nothing but to take steps to close the concern. Mr. Lamb would tell them that at any moment the mine might become self-supporting, leading on to a brilliant and permanent success.

Mr. LAMB said the company possessed a valuable mine and a valuable plant, and that it would be most suicidal to allow it to pass out of their hands. The worst and most expensive part of the work had been done, and all that now remained was to sink deep enough to reach Ferron's Reef, which was so payable in the adjoining mine. The necessary depth would be reached in about three or four months at an expenditure of about 50*l.* per month, but they must also go on with the eastern shaft.

The CHAIRMAN said that Mr. Lamb entertained no doubt whatever that when the eastern shaft had been sunk sufficiently deep the lode would be cut.

Mr. LAMB said the old miners had worked veins to the water-level, but that level was now deeper because of the drainage that had since taken place, and they had taken out all the payable quartz from the shallow levels. The present company were sinking these shafts to reach the veins in depth, and the required depth had not yet been attained. The company was formed to sink these shafts, and to work the reefs in depth, and according to the last report received the indications were such that the desired object was near at hand. In the adjoining ground, Ferron's Reef, there was a large quantity of quartz, and the general prospects were such that the owners were spending 5000*l.* in the erection of extra machinery, in addition to their ten heads of stamps; and their reef runs entirely through this (the Anglo-Australian Company) lease. He had no hesitation in saying that the Anglo-Australian claim was worth ten times the Ferron's claim. He had no hesitation in saying that the property was a most valuable one, and that it would have been in a dividend-paying condition before now had the shafts been sunk in the proper place—it was now only a question of a few months to sink the shafts deeper, and drive the cross-cuts to reach the same ground so productive in the adjoining property.

Mr. LAMB, in reply to further questions, said the sum expended on the mine was really very trifling compared with that which the colonists often expended on quartz mines. If this property were possessed by colonists they would not hesitate for one moment to find five or six times the capital already expended before thinking of giving it up. One company had been formed and had sunk 1000 feet deep and had never yet seen quartz, but still were going on. The Anglo Australian Company had now gone through all the hard work, the property embracing all the rich reefs of the district. The Black Hawk Mine had yielded quartz containing 3 ozs. of gold per ton, and that was on the same line.

The CHAIRMAN said that according to the present lease it was necessary to keep 30 men at work, but Mr. Lamb sent out an application last month to the mining authorities to ask for protection for the mine for six months while the proprietors of the mine were deliberating upon its affairs.

Mr. LAMB said the mine was in most trustworthy hands. Without reference to its working value the machinery ought to realise 3000*l.* in case of a forced sale.

After some further discussion, the Chairman proposed a resolution embracing the scheme shadowed forth in his opening remarks, which was seconded by Mr. DAUKES, and carried unanimously.

A vote of thanks to the Chairman and directors closed the proceedings.

BATTLE MOUNTAIN MINING COMPANY OF NEVADA.

The fourth general meeting of shareholders was held at Liverpool, on Monday (Mr. JAMES HALLOWS in the chair). The directors' report, and one from Capt. Joseph Richards (as published in last week's Journal), having been read—

The CHAIRMAN said that before proposing the adoption of the report he would make a few remarks as to what had been done. With regard to the deficiency arising from the produce of ore, included in the last report, he could only say the result had been to give the shareholders a larger dividend on the last occasion than should properly have been given. Considering the present state of the company, they had much reason to regret it. In addition to the depreciation in the value were the lower prices obtained for ore than they had expected, and the higher rate of freight they had to pay. The present year's workings, instead of obtaining prices ranging from 16*s.* to 20*s.* 6*d.*, as in the previous account, had only brought prices ranging from 15*s.* 6*d.* to 17*s.*, and this made a considerable difference in the value of the stuff raised. Added to this there was the considerable falling off—about 25 per cent.—in the production of the mine, which was quite unexpected, and of which hardly any proper reason could be assigned, except the sickness of the captain, who was absent for 12 months from the mine, the work having to be left to his son, a young man under 21 years of age, who, however, had done his work satisfactorily. But still the production they had expected from the mine had not been realised. They had realised upwards of 61,000*l.* worth of stuff from the mine since the commencement of its working, and that clearly proved it to be no bogus mine. The next point was that of Chinese labour. They were paid $35 a month, against the labour of the white man, which cost $4¼ a-day. They (the directors) trusted this would in time have a considerable effect upon the expenditure against the unfavourable circumstances to which he had referred. They had the fact that Mr. Bateman, having recently seen the mine, declared it to be in first rate condition, although the expenditure had been large. The work, however, which had been done would be lasting, and they would reap benefit from its having been done so effectually. Still, it had absorbed a large portion of capital, and they were rather crippled for want of funds. Mr. Bateman, who had promised to attend the meeting, would give them the latest information as to the present state of the mine and its future prospects. Capt. Nancarrow would also give his ideas with regard to the future prospects. Both these gentlemen knew the property to be intrinsically good, and that it required a little more expenditure—the workings to be driven more into the mountain, and some of them to be sunk deeper—in order to give a better return for the outlay. Meanwhile, expenses had been much greater than was anticipated, and they were placed in a position in which they did not expect to meet the shareholders—namely, that they were obliged to say there had been a small loss upon the working of the year, and that they would be unable to give a dividend. The report of Capt. Richards was in a very different strain from his report at the beginning of May, when he led them to believe that the workings were going on merrily. He had now taken a sudden turn. Mr. Bateman would, however, give his own opinion as to the present condition of the mine.

Capt. Richards' report was then read by Mr. Cochran (the secretary) as follows:

Nevada, Oct. 30.—We have not yet resumed the 113 drift north, the men we have being prosecuting the ore ground with a view to raising all the ore we can. The span-beam and action of the whim are in place; the smith is making the cars to run in the shaft, which will make them come cheaper than if ordered from a foundry. The lode in the stopes at the back of the 113, south of Termouth's rise, has improved a little during the past week, producing some good ore. We have resumed stoping in the back of the 73, near the Virgin shaft. The lode is several feet wide, contains ore of red oxide and green carbonates in spots, and has a very promising appearance. We are also taking out a piece of ground in the back of the 37, near the Virgin shaft, which contains some ore of virgin quality. In the back of the 37, near the new shaft, the lode is of large size, several feet wide, contains ore in spots and branches, requiring a good deal of assorting, but of fair quality. The rise in the back of the 135 ft. drift at Lake Superior, and noticed in my report of the 16th inst., that produced a few sacks of the richest ores in crystallised red oxide, &c., has again become poor, and is for the time suspended, the men being placed elsewhere. Last week's ore account at San Francisco, 800 sacks: depôt, 600; mine, 150 sacks. This week: At San Francisco, 800 sacks, depôt, 600; mine, 30 sacks.—JOSEPH RICHARDS, agent.

The CHAIRMAN said it would be seen from that report, as from others, that Capt. Richards had too little faith in himself. He would go on working, and as soon as he saw a difficulty he left that place and went to another, whereas they had impressed upon him the necessity of sticking to one place, and thoroughly opening it up before leaving it for another. If Capt. Richards would only follow his instructions, which were a repetition of instructions given to him when Capt. Nancarrow was there, the results would be, no doubt, more satisfactory. The specimen of ore in Mr. Henson's warehouse he (the Chairman) thought was one of the finest ever seen in the country. He was happy to inform them that patents had been issued, and they now only required Mr. Bateman's transfer. In conclusion, he called upon Mr. Bateman to address the meeting.

Mr. BATEMAN stated that he visited the mine in the early part of September. He admitted frankly that there was not so much ore in sight then as when he previously saw it; but they had equally good indications in September as they ever had. All they wanted was a superintendent to carry out the instructions given him. He believed Capt. Richards to be a good and honest man, and that he had not done anything intentionally wrong. He believed that if the 113 ft. was driven further into the mountain Capt. Richards would develope something very satisfactory to the shareholders. He thought the greater depth they went to the better property they would find. They found not only copper but silver as well; with proper working he had no doubt the property would pay, and all that was wanted to make it pay was for the superintendent to sink deeper and push his levels into the mountain.

Capt. NANCARROW said he had not at all altered the opinion he expressed a year and a half ago, which was that the vein was a master vein, and would ultimately produce an abundant quantity of copper ore, and probably silver also. He had never seen a prettier vein in his life; the deeper they went the greater percentage of ore they would obtain. He had not the slightest doubt they would find they had one of the finest mines on the coast if they persevered with the working. He believed that in a short time they would be in a better position than they had been in up to the present month, and their expectations would be fully realised.

Captain NANCARROW, in reply to the Chairman, said he had not the least doubt that the space between the workings contained a good body of ore.

The CHAIRMAN said that before moving the adoption of the report he would remark that they were approaching the end of their tether for money, and unless there were some valuable discoveries they would have in the course of January to ask the shareholders for some contribution. So far as he saw, 5*s.* per share would be sufficient, but they would require another 5*s.* some three or four months later if the mine did not improve.

A SHAREHOLDER asked whether the board had any check upon the expenditure? 6500*l.* on wages and board account seemed an enormous amount.——The SECRETARY stated that Capt. Richards forwarded a voucher for every item of expenditure.——The CHAIRMAN then moved, and Mr. HENSON seconded, the adoption of the report.——The motion was unanimously adopted.

Upon the motion of Mr. BATEMAN, seconded by Mr. PRYCE, Mr. Hallows was re-elected a director.——Mr. PRYCE stated that, as an evidence of his confidence in the company, he had increased his holding of shares.——Mr. CHAMBERLAIN moved, and Mr. LEEMING seconded, the re-election of Mr. Henson. This was unanimously agreed to.

The CHAIRMAN, in reply, said he had every faith in the property. Capt. Nancarrow had written to Capt. Richards explaining his views, which would be endorsed by the directors, and they now trusted that Capt. Richards would follow his instructions, and that when the directors met the shareholders again next year

they would be in a better position.——Messrs. John Bewley and Son were then appointed auditors to the company.

The proceedings closed with a vote of thanks to the Chairman and directors, and to Mr. Bateman for his trouble in inspecting the mine and his attendance at the meeting.

ALMADA AND TIRITO CONSOLIDATED SILVER MINING CO.

The seventh half-yearly general meeting of shareholders was held at the offices, Finsbury-circus, on Thursday,

Mr. HERBERT HEATH in the chair.

Mr. H. G. DENNISS (the secretary) read the notice convening the meeting.

The report of the directors stated that by comparing the tabulated statement of ores received, on their way, and awaiting shipment, with that put forth last half-year, the net amount received is about 300*l.* more, and the estimated value of ore to arrive some 2700*l.* less; on the other hand, there is a large accumulation of ores which the rainy season has prevented coming forward, but by last advices road freights were again offering, so that considerable shipments may soon be advised. The schooner, owing to great delay in the Straits of Magellan, only reached her destination on July 30. She is now, however, registered under the Mexican flag, and doubtless employed in taking the ores to Mazatlan and Guaymas, so that the vexatious delays formerly experienced may now be considered at an end. The crusher, indented for by Mr. Clemes, has been sent out, and the directors expect to hear of its arrival from day to day. Since June 30, the driving of the tunnel, which is 7 feet high and 6 feet broad, has been regularly proceeded with, except during the annual holidays, and consequent scarcity of labour, the end should now be nearly approaching the Mina Grande shaft, the clearing and timbering of which has proceeded simultaneously with the tunnel drive; the junction of the two may be expected in about a month or less from this date. A powerful engine will be required for the Mina Grande shaft, but Mr. Clemes is of opinion that the small 10-horse power engine, which was formerly used for driving the stamps, can, with additions to the extent of 21000, be made available for the present. The completion of the tunnel and shaft will cause a material reduction in the expenditure, although a deal of clearing will have to be done before the Mina Grande can be reported upon.

The directors, guided by the unanimous testimony of those on the spot, believe that black ores exist there in large quantities, and of higher ley than those hitherto found. During the half-year considerable additions have been made to the machinery at the mines, consisting mainly of a new boiler for the large engine, a powerful crusher, an additional lathe, kibbles, jiggers, &c. This will account for the higher percentage of working expenses. The lode in the Providencia Mine has not turned out so rich as when first cross-cut upon, neither have the black ore stopes maintained their full average; but these fluctuations are only what must be expected, and a change for the better may at any time take place. The half-year's profits amount to 5268*l.* 15s. 5d., the total at credit of revenue to 10,183*l.* 4s. 11d., which sum is represented by—Increase in stores on hand over last half-year, 2400*l.*; in ores on hand and in transit, 3200*l.*; and in a much heavier stock of concentrated and stone ores raised previous to June 30, and awaiting shipment at that date. For the reasons referred to at the commencement of this report there are now some 200 tons of concentrated and stone ores in Mexico which, by means of the schooner, the directors expect soon to hear are on their way to England, but as some considerable time must elapse after their arrival before the net proceeds of their sale become available, the directors do not recommend the declaration of a dividend this half-year, although the profits realised would warrant them in that course, but trust that they will be in funds to do so when they next meet the shareholders.

The CHAIRMAN in drawing attention to the report of the directors, stated that the raisings for the six months had been 30 per cent. more than during the previous half-year, while the "ley" of the ore had fallen off, and the quantity of rough stone raised had given a less quantity of clean ore for treatment; but, at the same time, the black ores had increased 50 per cent. in quantity raised, but had not realised so well on this side of the water. He drew attention to that chiefly because the estimated profits sent home to them by telegram each month, and inserted in the newspapers, differed materially from the amount shown in the revenue account. According to the statement received monthly from Mr. Clemes, after deducting home expenses, the profit amounted to 8500*l.*, while in the revenue account for the half-year the profit was 5268*l.* Shareholders naturally asked how this discrepancy arose—it was very simply explained. Exactly a year ago, these identical ores realised 60*l.*, 59*l.*, and 58*l.* per ton, and during that period they were valued by Mr. Clemes, in his estimate on revenue account, at 30*l.* per ton. At this valuation the net proceeds exceeded the estimate by 623*l.*, so Mr. Clemes raised them when valuing for revenue purposes to 32*l.* per ton. During the following six months they fell to 54*l.*, 50*l.*, and 48*l.*, and the last shipments only reached 38*l.* and 37*l.* respectively. Mr. Clemes continued to value the black ores at 32*l.* per ton, added to which 16*l.* expenses from the mines till receipt of account sales, brings up their sale value to the amount of 48*l.* per ton. The falling off of 9*l.* per ton on 360 tons of ores raised and forwarded from the mines during that period up to the 30th June accounted for the difference, not satisfactorily, but very plainly. The reason of this was partly because the "ley" of the ore had fallen off, and also because the tariff which rules at the Government works in Germany militated very much against them, 8 per cent. was deducted for zinc, in addition to which the trifle hitherto allowed for the gold the ore contained had been discontinued. Therefore, however great the disappointment in the amount of profit realised, the directors were very glad to be in a position to account for the falling-off. The smelters in England would not take this class of ore at all, giving their attention almost exclusively to ores of a very much higher grade, containing 400 to 500 ozs. of silver per ton; in fact, some of the smelters had given up smelting altogether, owing to the high price of coal. In the revenue account they would find the freight charges in silver ores 226*l.*, as against 1008*l.* last half-year. During the previous half-year 1050 mule loads of ore were sent down, and during the last half-year 2069, so that the freight charges were just double. The balance on revenue account was 10,183*l.*, and it would naturally be asked why the directors did not pay a dividend. The answer was simply this—On June 30 there were 137 American tons of ore waiting shipment in Mazatlan, which had been raised previously to that date; since then two bills of lading for two parcels of ore have come forward, one of which has arrived. At the end of August they had on hand at the mine ore to the value of $48,630, or nearly 10,000*l.*, their profit, therefore, was in ores, and not in coin. The docile ores Mr. Clemes beneficiated on the spot, and used the proceeds to meet the current expenditure. The company's schooner arrived out in October, and was loading a cargo of ore at their own little port at Ajiavampo, for Mazatlan; she was spoken of very highly, and described as the finest craft on the coast. He should mention that in September there had been one of those local revolutions to which Mexico was subjected from time to time. They had, however, heard nothing of it from Mr. Clemes, but from Mazatlan. The works had been suspended for a portion of the month, and during the remainder the surface operations had been continued at half time. They had a telegram in October from Mr. Clemes, stating that peace had been restored, so that this local disturbance was the time being at an end. But he much feared that in consequence of the partial suspension of the works during September, the profit for that month would be very small, if anything. They might hope that if the price of coals declined the smelters in England might purchase their ores, but they did not expect to get better results than from Freiberg. By this time they hoped the tunnel had reached the Mina Grande old workings. They anticipated by Christmas the junction would be effected with the shaft, and that by the end of February, or beginning of March, they would hear what Mina Grande really contained. The unanimous testimony of friends, as well as those who were inimical to them, was that the lower workings contained large quantities of black ore of very much better quality than had yet been found. The last letter from Mr. Clemes stated that the mine was looking rather better than it had for some time past. Although the directors were not in a position to pay a dividend, because they had not the money to pay it with, yet he was in great hopes that by the aid of their schooner they would in six months hence be able to recommend a dividend. He then moved that the reports of the directors and manager, together with the balance-sheet, be received and adopted.

Mr. FREDERICK SAUNDERS seconded the proposition.

Mr. CROKE enquired when the ore on hand would be brought to market?

The CHAIRMAN said that 60 tons was shipped on October 24, and by the first week in January they ought to hear of its arrival at Bremen.

Mr. CROKE asked if the directors could not declare a dividend between now and the next half-yearly meeting.

The CHAIRMAN said that was a point which the directors had very seriously discussed; they were of opinion that it did not do for any mine to declare a dividend until they had the money in the bank to pay it with. They had got the value in the ores at the mine, but they would throw themselves back if they anticipated the amount they would realise by means of a loan or anything of that kind—they would always in that case be six months behind their time. It was true they had ores representing more than sufficient to pay the dividend, but they had not got the money. He maintained that in a mine everything should be paid out of revenue. If they had the money in hand before the time of the next meeting, the directors would be too glad to meet the shareholders views. As to future estimates, Mr. Clemes will see by the value realised that he must base his estimate of profit at a much lower rate. So glutted was the market in Germany, that no less than two or three months elapsed from the time the ore reached Bremen to the receipt of the money, so that really they did not get the result of the previous six months till six months afterwards. In future upon the receipt of the monthly telegrams there will be appended a statement that the estimate is subject to whatever amount the ore may realise.

The CHAIRMAN, in reply to further questions, stated that the debts set forth in the balance-sheet had been very considerably reduced, the only acceptance outstanding being 581*l.*, exclusive of the schooner and her cargo. The two dead works—the shaft and tunnel—when completed would cause a very material reduction in the expenditure. Mr. Clemes wanted to place a powerful engine on Mina Grande in order to raise water and ores from the lower working to the level of the tunnel; but they did not intend to do that at present because they could not afford it, besides which, they wanted to see what they had there. The prime cost of such an engine would be from 1600*l.* to 1700*l.*

The reports and balance-sheet were then unanimously passed.

Mr. CROKE proposed a vote of thanks to the Chairman and directors. Personally, he was very much satisfied by the explanation afforded by the Chairman.——Mr. LEDWARD seconded the proposition, which was put, and carried unanimously.

The CHAIRMAN, on behalf of his colleagues and himself, thanked the proprietors for this renewed mark of confidence. He could only say they were sorry they could not pay a dividend upon the present occasion, but at the same time they were on the safe side, and would endeavour to continue so. He had no faith in a company that provided machinery out of capital and dividends out of revenue. He hoped at the next half-yearly meeting they would have something more encouraging to submit to the shareholders.

The meeting then separated.

BURROW AND BUTSON MINING COMPANY.

The second half-yearly general meeting of shareholders was held at the company's offices, Finsbury-circus, on Wednesday,

Mr. J. W. WILLIAMSON in the chair.

Mr. W. H. FORBES (the secretary) read the notice convening the meeting, and the report of the directors and agents, and statement of accounts, showing sundry credits (including balance of purchase-money) 7197*l.* 17s. 11d., and cash at bankers 195*l.* 6s. 3d., were submitted.

The directors reported that since the July meeting the main shaft had been cleared to the 62 fm. level, and levels had been driven east and west at that depth. Owing to the low price of blende the raising of ore had been confined to a few points in the mine, where lead and blende had been raised to a moderate extent on tribute. There are now indications of the market for blende improving. Only 1441 of the 10,000 shares, offered to the shareholders at 12s. 6d. per share, were applied for, and the directors have since, under the powers given them by the Articles of Association, entered into an arrangement, by which Mr. W. Stevens will take up the unallotted shares, the directors thinking it better, under the circumstances, to secure the necessary amount of capital to continue the working of the mines rather than run the risk of stopping the company's operations altogether, before a fair trial has been made as to the merits of the mines. Mr. Stevens has stipulated that he should be appointed managing director, in order that he may be the better able to look after the interests of the company, and to secure the most efficient and at the same time economical management. It will be necessary to call two special general meetings of the company to alter the Articles of Association to enable this purpose to be carried into effect. Although the mines, from the low price of ores, and the high price of labour and materials, have not hitherto answered the expectations of the directors, they trust that by patience and perseverance the shareholders may yet receive a good return for the money they have invested.

The agents, after reporting upon the various points of operation, state that the dressing-floors have recently been much improved, and are now in full working order, with 12 jiggers, including two copper bottoms. The 60-in. cylinder pumping and 24-in. cylinder crushing and winding engines are giving perfect satisfaction, with a moderate consumption of coal. The demand for skilled miners can be easily supplied at the current rate of wages. The prospects for lead are good, particularly in the eastern part of the mines, and if the copper lode just cut in the 62 fm. level west holds as good as it promises it will be very important, inasmuch as it goes into whole ground for about 200 fms. and under the large bunch of copper ore which produced 50,000*l.* in one year of the last workings.

The CHAIRMAN said that since they had met the shareholders he had been down to the mine, and had thoroughly satisfied himself that as to metal they had abundance in the mine, but, unfortunately, it was of no use to them unless they could sell it. They would recollect that in the first instance they began the mine as a blende mine, the price of that metal being then from 5*l.* to 6*l.* per ton. They had made haste to erect the necessary works, but in the meantime the price had fallen to 3*l.* per ton, and as it cost them 2*l.* 10s. per ton to get it to market it would obviously be folly to attempt to sell at the present price. He was glad, however, to be able to tell them that the market was now stiffening, and that they would be able to take full advantage of the improvement. They had 100 tons of blende ready for market, and as soon as it was desirable to sell they could quickly have another 100 tons ready. They hoped that by continuing their workings they would now be getting into lead, but in the present position of mining in Cornwall they considered it preferable not to press too much forward, but merely to hold their own. There had been practically no response to the offer of shares at 12s. 6d. each, and it became a question whether they should raise money at almost any cost or stop the mine. They determined, in the interest of the shareholders, upon raising the money, and Mr. Stevens had such faith in the mine that he had consented, upon certain terms, to take the whole of the remaining unallotted shares of the company. They wanted to be able to tide over the present dull time, and this arrangement would enable them to do so. The mine was now, he hoped, out of all difficulties, financial and other, and they would, moreover, have sufficient capital for the next two years, by the end of which time the value of the property would have been thoroughly ascertained. The mine was looking very well, so that they hoped within some reasonable time to be in a position to offer them a dividend. They had a notion that the blende would turn into lead in one part of the mine and into copper in another. The price of lead was at present good, but copper was scarcely worthy of consideration. He thought they might go away satisfied that the mine was good, though the price of the produce was for the moment low, and it was gratifying that they had not to ask the shareholders for money, and that they were in a good financial position. He was not aware that there were any further observations for him to make, and would, therefore, formally propose that the reports and accounts be received and adopted.

Mr. S. E. ILLINGWORTH seconded the resolution.

A SHAREHOLDER remarked that the Chairman had just said that they were to expect dividends at the end of two years, which appeared long after what had been said of the mine.

The CHAIRMAN had not said so; he said that if the price would mend they would have dividends in a reasonable time. This was with reference to the blende; copper mining would not pay at present prices.

Mr. VON USTER thought that hereafter the copper would not be despised. It must be remembered that the copper from the Burrow and Butson Mines had always been recognised as extra rich, as an instance of which he might mention that in 1822 it fetched 9*l.* per ton, when the copper from other mines in the Redruth district was fetching but 7*l.* 5s. The suddenness of the collapse of the old workings was remarkable, but showed that efforts had not been made to test the mine. Thus they had left a level going west, and producing copper, within 3 fathoms of the Wheal Kitty cross-course, yet all miners knew that such a cross-course produced a change in the lode—sometimes for better and sometimes for worse, and it was but reasonable to expect that they would at least have seen the cross course before stopping. The level had now been driven through the cross-course, and in 10 fathoms driving a lode 4 ft. wide had been found. This lode had not been explored for, yet it was now found, and was richer in the sole than above. In this direction they would get under the rich ore ground which had proved so valuable above. They had a great flood of water in both the 50 and the 62 fm. levels, and it was between the 30 and 40 fm. levels that the rich bunch of copper came in. The lode was now from 4 to 5 ft. wide. As to the lead, they had in the eastern part of the mine all the characteristics of a great lead lode. He must say that the old miners had been very unfortunate, having in more than one place driven in dead ground, while there was ore ground on both sides of them. They had now tributors at work in the sole of the 30 at 8s. in 1/. They had every reason to hope that the mine would change from blende to lead or copper, and they would not then treat the copper with disdain. They had recently discovered a lead lode 3 ft. 3 in. wide, which traversed the whole of the Burrow and Butson sett, was seen in West Great Chiverton to the east, and in Mr. Davey's ground to the west, and was leady throughout. All they wanted was about 4/. per ton for their blende, and they could then send 300 or 400 tons per month to market, and earn good profits.

The CHAIRMAN remarked that the whole of their machinery was in first-rate order and condition, and would suffice to carry them down to a considerable depth. He thought they had everything to be satisfied with as to the prospects before them.

The report and accounts were then unanimously adopted.

A special general meeting was held immediately afterwards, for the purpose of considering the arrangement with Mr. Stevens and passing the necessary resolutions thereon.

The CHAIRMAN said he had explained the coming forward of Mr. Stevens, so that he need only add that that gentleman maintained—and the directors admitted, the reasonableness of his views—that if he were going to put in a large amount of money in addition to that which he had already embarked in the concern it was but natural that he should wish to have a larger amount of control over its expenditure, such as his appointment as managing director would give him. He did not ask for any salary, but the provision was inserted in the resolution, as it might hereafter be considered that he ought to receive remuneration. He would, of course, be under the general control of the board, and from the large stake he would have in the concern there could be no doubt that he would do his best for the company. The other point upon which he required alteration was that the number of his votes should not be limited to 100, but that he should have votes in the same proportion as other shareholders—one vote for every five shares; this point the directors were also willing to concede. To give the shareholders the opportunity of determining whether they would adopt the arrangement he would formally move that clause 125 of the company's Articles of Association be altered by adding the words—"That Mr. William Stevens be appointed managing director of the company, at such remuneration as the directors may from time to time fix, and that the regulations of the company as to retirement from office shall not apply to the said Mr. Stevens until the company shall have paid a dividend on the capital of the company at the rate of 15 per cent. per annum for any one year." With regard to the portion of the resolution relating to the retirement of Mr. Stevens, the meeting would understand that under the Articles as they stood he would have to retire by rotation in the same way as the other directors, and he might not be re-elected; it was this contingency which they wished to provide against.

A SHAREHOLDER enquired the number of shares to be taken and the price to be paid.——The CHAIRMAN said there were 8751 shares, and the price agreed was 7s. 6d. per share; this would give them over 3000*l.* which would be ample.

Mr. STEVENS remarked that inasmuch as in helping the company he was helping himself the shareholders need not doubt that he would do his best to promote their interests.

The resolution was then put to the meeting and carried unanimously, and it was further resolved to alter clause 126 by striking out the words "but no member shall have more than 100 votes," the meeting terminating with the usual complimentary vote of thanks to the Chairman.

BEDFORD UNITED MINING COMPANY.

At the four-monthly general meeting of shareholders held at the offices of the company on Wednesday—

Mr. R. MCCALLAN in the chair,

The notice convening the meeting having been read, the accounts were produced, showing a credit balance in hand of 457*l.* 12s. 4d., and an estimated balance against the mine of 352*l.* 19s. 9d. After some discussion it was decided on a call of 6d. per share.

Capt. WILLIAM PHILLIPS being present read his report of the 15th inst., and entered lucidly into the present and future prospects of the mine, which are very encouraging. He further stated that, owing to one or two drawbacks (the breakage of machinery, &c.), he had not been able to sample regularly, but notwithstanding these accidents he had sold in the last month about 500*l.* of ore and mundic, and had reduced the costs about 150*l.* below the estimates. As everything now was in good order, he hoped to maintain a regular course of working, and as soon as the standard improved to resume stoping operations, and increase the returns considerably.

The CHAIRMAN congratulated the shareholders on the improved position of their property, and coincided with the views of Capt. Phillips as to the future development of the mine, and said he believed a vigorous exploration of the south lode would justify the shareholders in looking forward to a lasting and remunerative concern. Any day a course of ore may be discovered, which would prove the value of the undertaking. The mine being worked by water-power is not so much affected as others dependent entirely on steam, yet the high price of labour and low price of copper has materially tended to keep the balance upon the wrong side. The question of dues has had the attention of the committee, and he (the Chrirman) much regretted that their attempt to obtain a reduction or remission of dues had not been successful.

Mr. LAWS said that it will, no doubt, be remembered that at the meeting held on April 9 it was determined to make application to his Grace the Duke of Bedford for a temporary reduction of dues. In conference with the lessors it was thought desirable to defer such a request in the hopes that an improvement in the mine or in the standard might have taken place, but as matters did not mend it was decided on obtaining an interview with his Grace the Duke of Bedford while at his Devonshire seat, and a letter was addressed to him on Aug. 20 as follows. (Letter read). No notice whatever was taken of this communication by his Grace directly or indirectly until two months after. On Oct. 20 a letter was received from his Grace's steward full of regrets in consequence of his Grace's instructions having been inadvertently laid aside, &c., and winding up with the unexpected announcement that his Grace is unable to consent to a remission of the dues. Independent of the want of courtesy shown by his Grace in not replying to our letter, the determination to exact from us a heavy royalty is so far prejudicial to his interests that we must now exercise our own discretion in the development of the mine, at the same time carrying on such operations as may be deemed of advantage to ourselves with the utmost regard to economy.

In reply to a shareholder, it was stated that, as far as known, every bill and account had been charged up, and that the shareholders were now in possession of the actual state of their affairs.

A vote of thanks to the Chairman terminated the proceedings.

DEVON GREAT CONSOLS COMPANY.

The ordinary general half-yearly meeting of shareholders was held at the company's offices, Gresham House, Old Broad-street, on Tuesday,

Mr. W. A. THOMAS in the chair.

Mr. A. ALLEN (the secretary) read the notice convening the meeting, and the statement of receipts and expenditure for the six months ending October, showing a credit balance of 5681*l.* 18s. 10d., was submitted.

The CHAIRMAN remarked that the shareholders had all had a copy of the accounts of receipts and expenditure, and the directors had really very little beyond that to communicate, for the meeting was comparatively formal, the business before them consisting merely of the reception of the accounts and the hearing the report of the directors, and of Capt. James Richards, the agent of the mine. He would only read the directors' report, but would be happy to answer any question that might suggest itself to the shareholders.

The directors reported that the balance of expenditure has, unfortunately, been adverse for the company. At the same time, it must be observed, that the large item of timber, amounting to about 3372*l.*, which must of necessity be imported during the summer season, has not been consumed, but for the most part remains in stock. There are also on hand ores and arsenic unsold to the value of about 3000*l.*, but upon which the cost of production is included in the account now presented. Timber, as well as other materials, has advanced considerably, and adds materially to the unavoidable expenses of the mine. The directors trust there will be no necessity for another call before the next meeting, especially if an improvement in the price of copper ore can be established, and the rebate on the royalty be obtained from the Duke of Bedford. It has been intimated by his Grace's agent that he will be in a position to pay it so soon as the new leases are executed.

The company's solicitor has returned the draft of the mining lease, with some slight modifications approved, to the Duke of Bedford's solicitors, but it is waiting for those of the Railroad and Arsenic Works, which are to be of even date with that of the mine. It will be perceived by Capt. Richards' report that the progress of development of the experimental works has not been so satisfactory as could be wished, owing to the hardness of the ground and the want of sufficiently skilled labour to contend against it; and also that the mines are worked upon a very reduced scale at present, owing to the low standard for copper ores and the high rate of wages and all materials. The attention of the directors is unremittingly applied to the reduction of the costs, and they have succeeded to some extent, but find it very difficult to dispense with an efficient staff of agents, owing to the vast area over which their superintendence is required. The directors have just concluded a contract for this company's make of arsenic for 1874 on more advantageous terms. In conclusion, the directors can only recommend members to watch the development of the ground now being opened out, which they still feel confident will ultimately prove the correctness of the views of the practical advisers of these operations.

Capt. James Richards reported that at Wheal Maria the main lode has been cut through at the 95, the deepest level, and that driving has been commenced both east and west, in the hope of meeting with a change for the better underneath the great deposit of ore first discovered in the mines. On the new north lode the adit level has reached the great cross-course, which proves to be 40 ft. wide, and has been continued to the east thereof for a considerable distance on the course of the lode; the engine-shaft has reached the depth of 28 fathoms, and a cross-cut has been commenced south for the intersection of the lode, which will be reached in about three months, and as observed in former reports, from the size and character of the lode, its intersection by the great cross-course, and the congenial nature of the country, the trial at this and deeper points will in all probability be attended with success. At Wheal Josiah, Richards' shaft has reached the depth of 10 fms. below the 235, and considering the nature of the ground, fair progress is being made. On getting down another 10 fathoms the lode will be cut through, and at this depth we are anticipating a favourable change. At Wheal Emma the main lode at the 216 fm. level continues large, and still presents encouraging appearances, and on the new south lode good ground has been laid open, the 130 and 115 fm. levels still continuing productive and promising, and from these and the other exploratory points of importance, we look forward, as in times past, to meet with further important discoveries as the workings continue to progress.

Mr. CHRISTOPHER RICHARDSON would be glad to learn what loss had been incurred during the half-year. From what he saw of the accounts it appeared to him that it had been 4436*l.*

The CHAIRMAN said that it was not far short of 5000*l.*, but they had arsenic and copper on hand, which would materially reduce that amount.

Mr. RICHARDSON enquired why the Exchequer Bills did not appear on the other side of the account?——The CHAIRMAN explained that it was because they were placed among the assets, and there was no asset and liability account presented at the present meeting, the full accounts being only presented at the annual meeting in May.

A SHAREHOLDER asked whether the operations were now carried on under the arrangements contained in the new lease, and, therefore, subject to the approval of the agent of the Duke of Bedford?

The CHAIRMAN said that all their operations were subject to the approval of the Duke's agent, but there was no probability of any dispute, as he was so constantly at the mine once a fortnight at the least, that he would take care that the company's agent would not do much of which he should afterwards have to complain.

Mr. RICHARDSON enquired what dues they were paying, and whether they had a fair prospect of getting tin in depth?

The CHAIRMAN said that under the new lease they would actually pay 1-18th dues, but they had had some little contention as to one clause, as the directors considered the concession should commence somewhat earlier than the Duke's solicitor stated. As to the existence of tin, the mining experts had always said that there must be a great deposit of tin below the copper, and the Duke consented to reduce the dues upon condition that the company did certain work in connection with the explorations for tin, and it had now been agreed that when the lease is signed he will return 1290*l.* as rebate on the dues which he has already received to June 30.

Mr. ALLEN explained that the arrangement took place on July 1, 1872, and the Duke's agent wished the rebate to commence upon the ore raised from July 1, while they wished to have it upon the ore paid from date which gave them an additional two months reduction, and this had now been conceded.

The CHAIRMAN observed that they had to pay the one-twelfth royalty, but they had made an agreement to do certain work, and if at the end of the year that work had been done the difference between one-twelfth and one-eighteenth was returned to them. In connection with the provisions of the new lease, they had had to do certain preliminary work, and they considered this was equivalent to the fulfilment of the agreement to the letter. It was the preliminary work that had caused the loss on the last six months' working.

Mr. RICHARDSON enquired how it happened that there was Colcharton on the expenditure side of the account, and whether a further call would be necessary?

The CHAIRMAN said that Colcharton was a mine attached to the Devon Great Consols, and which would be included in the new lease. It was purchased some time since by the Duke from a private freeholder because there were certain lodes which were supposed to be identical with those of Devon Great Consols, but they had not yet found them to be so. As to the question of call the directors hoped to be able to go on until the next meeting without troubling the shareholders. They

had the proceeds of the sales of ore, and of the sales of arsenic, and 5000*l.* of Exchequer Bills. Their accounts showed that they were only 1100*l.* worse in available cash than at the last meeting, and they did not anticipate having to expend the 10*s.* per share extra which the call had given them. They had, moreover, reduced their cost by between 1300*l.* and 1400*l.* per month, and did not know whether they would not be able to make some further reduction.

A SHAREHOLDER enquired whether skilled labour was returning to the mines?

The CHAIRMAN replied that some additional labour was available, but it was not very skilled labour. It was, in fact, some men from the coal mines and elsewhere. The men had been earning high wages at the collieries, but did not like the work. Altogether, their labour was very inferior to what they had 15 years ago. A friend of his, just returned from America, told him that 350 miners came back in the same vessel, and that there were many more who would return had they the means of doing so. As to the position of copper, there was at present more copper than was wanted; but if the propositions to coat iron vessels with copper succeeded it would vastly increase the demand, and, of course, the Devon Great Consols would get their proportion of the advantage. They had trenched somewhat upon their reserves since the last meeting, as they had not been opening up so much new ground. The arsenic cost them more to manufacture at present, but they got a correspondingly better price, but it had not been the same in the case of copper. Only a limited quantity of arsenic is used, and they were the largest producers.

Mr. TAYLOR enquired whether they had any estimate of the percentage of reduction in the cost, and of the percentage of rise in the price of coal?

Mr. ALLEN stated that the mine cost was 3281*l.* in April, 3277*l.* in May, 3295*l.* in June, 2811*l.* in July, 2567*l.* in August, 2262*l.* in September, and 1980*l.* in October. They were paying fully 100 per cent. more for coals than they were two years since, and it was the same with timber. On quantity taken and prompt payment, however, Mr. Morris got a reduction of 7½ per cent. upon all coal used for their steam-engines.

The report and accounts were then unanimously adopted, and thanks were voted to the Chairman and directors and duly acknowledged, the proceedings terminating with a cordial vote of thanks to Mr. A. Allen, the secretary, for his constant attention to the interests of the company, and for his readiness at all times to give the shareholders every information in his power.

WEST SETON MINING COMPANY.

A special meeting of adventurers was held on Wednesday, by adjournment, "to take into consideration the future working of the mine, and for the appointment of agents or otherwise, and to pass such resolutions thereon as may be deemed advisable." Mr. T. PRYOR was voted to the chair, in the absence, through illness, of the purser (Mr. O. Matthews). There was a large attendance of shareholders, notwithstanding the torrents of rain which fell all day. Several proxies were handed in.——Capt. TEAGUE said he desired to explain that he had neither applied directly or indirectly for a single proxy, and some which had been handed to him he sent back, saying that he had not applied for one, and would not represent one. He wished everything to be fair, open, and candid on that occasion, and he hoped everything would be done in a spirit of fairness, the shareholders refraining from going into useless talk.——Mr. HIDDERLEY had been favoured with a certain number of proxies from persons of whom he had no knowledge, and consequently could not have applied to for any. They were sent to him as being a shareholder, and he thanked the senders. He hoped that he would have sufficient strength to frustrate the attempt that had been made, which he considered was anything but straightforward.

The CHAIRMAN said since the last meeting he had taken some little trouble about the accounts, and found that they stood in a position not generally known to the shareholders. The cost at the last meeting was brought up as close as it could be to the end of September, and they had sold ores to the account of 2200*l.*, which had not been credited in the accounts, although the cost was paid upon them; also that 740*l.* was charged on account of the thirteenth month, which had not then been paid. He found another very large item standing to the credit of the company, which he was not aware of at the last meeting—500*l.* to the credit of the club. That was not generally supposed to be credited to the company, and these items altogether made something like 3000*l.* in favour of the company, instead of a balance of 177*l.* 12*s.* 2*d.*, which was supposed to be the debit at the last meeting. It was a very important thing to the shareholders to know that there was something like a dividend of 7*l.* or 8*l.*, which might some day be divided amongst them, instead of 177*l.* balance against them. All must sympathise with Mr. Matthews in his illness, and he hoped any matters brought forward that day would be alluded to in a temperate spirit, and that they would have no personal feeling shown, the business being conducted in a fair and open way.

On the motion of Capt. TEAGUE, seconded by Mr. A. LANYON, Mr. Budge, of Camborne, and Mr. Loam, of Liskeard, were appointed to examine the proxies.— This having been done, proxies in favour of Mr. Hidderley, amounting to 73 shares, were handed in in favour of that gentleman, and 40 in favour of other persons. Proxies amounting to 14 shares were informal.

Capt. TEAGUE said he should be satisfied whichever way the voting went. He moved that "In consideration of the ill-health of Mr. Matthews, the purser, his name remain on the books of the mine as now, and that a committee of three gentlemen be appointed to look after the interests of the adventurers during his illness; that the cheques be signed by two of these gentlemen, and that all transfers be acknowledged by them, or one of them, on behalf of the adventurers."——Mr. HARRIS seconded.——Capt. BATH said Mr. Matthews was not confined to his bed, and there was no neglect of business.——Capt. TEAGUE: I am not saying there was any neglect of business. I was merely saying that a report I have heard, and a letter I have seen, state that Mr. Matthews is confined to his bed.——Mr. LANYON was sure Capt. Teague brought forward his motion in a fair spirit, and under circumstances which gave him the impression that Mr. Matthews's state of health not only made him, but in all probability would for some time make him, incapable of transacting the business. As this was not the case, however, he wished Capt. Teague not to press his motion to a division'——Capt. TEAGUE handed in a letter from Mr. P. P. Smith to show that he had heard of Mr. Matthews's illness. He put his motion in the present form because he thought the committee would have a kindly feeling towards Mr. Matthews, who, when he was restored to health, and prepared to resume duties, would not be any further interfered with. If he could not attend to his duties for some time the interests of the mine should not suffer.

The CHAIRMAN said a report had been going about that Capt. Teague was going to interfere with Mr. Matthews in the pursership of the mine, but Capt. Teague had told him he did not want to do so. This he mentioned to his brothers, and they felt very much obliged to Capt. Teague for having spoken as he had.——Mr. BUDGE said to Nov. 11 Mr. Matthews had performed the financial duties connected with the mine, had acknowledged transfers, and had done the actual work as complete as any purser in the county of Cornwall. It struck him that the agitation in connection with this affair had had an influence on his health in the past week. Trusting that this was a temporary illness, and knowing that Mr. Matthews was not worse than he was a month ago; seeing also that the duties of the mine were exceedingly well performed, it struck him that it was rather an invidious thing to assume that he was going to die because he was ill.——Mr. LANYON proposed that the motion be not at present adopted.——Mr. BUDGE seconded.

Mr. LOAM thought that Mr. Matthews's illness was due more to mental than physical suffering, consequent on the resolutions of the last meeting. He seemed better than he had seen him for some time past, and he thought there was no need of apprehension that he would not perform his duties for the future as he had hitherto done. He did not see how the committee could work practically.——The voting then took place, 12 supporting the amendment, and 9 being against. Mr. Cartwright voted for the amendment.——Capt. TEAGUE: Are you a shareholder, Mr. Cartwright?——Mr. CARTWRIGHT: Yes, Mr. Teague.——Capt. TEAGUE: Excuse me asking the question.——Mr. CARTWRIGHT: You may ask me that or any other question you choose.——Capt. TEAGUE added to his resolution the words, "or anyone deputed by the committee to do the work," and on a scrutiny of the the shares the motion was carried by 107 to 104.——The committee appointed were Mr. P. P. Smith, Mr. W. Harris, and Capt. Teague.——Capt. TEAGUE said they must go further. It appeared to him that this was a sinking ship. The shares he had were those held by other parties who had received large dividends, whereas he had had the pleasure of paying heavy calls. Some alteration must be made with regard to carrying out the mine—(hear, hear)—for unless they could cause the mine to cease making calls he feared that the whole district would be in danger. He moved that the services of the present staff be dispensed with at the end of the month, that they receive a month's salary, and that they received the thanks of the adventurers for past services.——Mr. W. HARRIS seconded.

Mr. LANYON said he must express opinions on this matter. Capt. Teague's remark about having dividends before he took shares seemed to imply that he thought that once a divident mine for everone. He considered that this was a thing they would be glad to see, for they had had in Cornwall no parallel for it. He challenged them to show by the side of West Seton any mine that had given dividends more regularly, or one held before the public conducted more honourably or fairly. He challenged anyone else to produce agents who could stand before the adventurers and look in their face, saying they had discharged their duties faithfully; and in reference to finances, he challenged anyone to say West Seton did not bear comparison with every mine in Cornwall. He scarcely liked to trust himself in this matter. He thought that the kindest feelings were existing throughout, yet without a single remark of any agent of the mine having neglected his duty they were called upon to dismiss the staff of the mine. The gentleman told them the district was in danger. He wished to his heart that he thought it was that motive that prompted him to put such a resolution before the meeting. The district in danger, indeed! The district was more in danger from such actions as these with respect to honest men—men who had for 20 years conducted the affairs of the mine to the satisfaction of all; and the seconder of the motion had lauded them to the highest. (Applause). The man who had spoken as the seconder of the resolution—after receiving year after year for 20 years dividends—was now man enough, when the balance of power went into another channel, to turn round and second a proposal that the agents of the mine be dismissed.——Mr. HARRIS: I say, Lanyon, you——

Mr. LANYON said the Chairman would call him to order if he was wrong. He challenged them to find a more unkind, arbitrary, monstrous treatment than to dismiss a staff of agents who had faithfully served them without ever once saying to them, "We think the mine should be differently conducted." They had not even given them a chance to conduct that mine differently. Capt. Bath had spent twenty years of his life—no mean portion of it—on that mine, and he was to be dismissed in this manner without being found fault with. Such conduct was most monstrous, and there was no parallel to it. There had been talk about danger to the district because honest men conducted their affairs, and had done so for twenty years. Was there danger in being honest? No; but there was danger in the policy of a man who rose—although all honour to him for doing it—from the humbler station in life to a higher position in the social scale, and then sacrificed, strikingly, all honesty of purpose because he had it in his hands to grasp the honest right of another. Such a man was contemptible indeed. He proposed as an amendment—"That this meeting, having the utmost confidence in the agents, desires to retain their services.'

Mr. LOAM seconded the amendment. The resolution was trifling with the feelings of the shareholders in the mine, many of whom, like himself, had been connected with it for 25 years. Without any charge against the agents, who had served them honestly and faithfully during the whole of that time, it was now moved that their services should be dispensed with, without a single reason for doing so. They would not kick a dog out of doors without a little more ceremony. (Applause.) He could hardly express his feelings in the matter. He hoped when they had men who had long and faithfully carried on the mine, giving more consecutive dividends in a way which had not been exceeded by any mine in the district, that they would have some consideration for their feelings, and retain them in their position, unless some cause was shown to justify their not doing so. It was well to have the power of a giant, but not always well to wield it. He was sorry to see Capt. Teague coming to the meeting to endeavour to wield his power, and to bind upon them his will and pleasure, simply because he had the power.

Mr. CARTWRIGHT said no single mine on Mr. Basset's property had been worked so well to Mr. Basset's satisfaction, or so greatly to his (as his agent), as West Seton. He questioned very much if there was any mine in the district in such a thoroughly efficient state—not only as a mine, but financially speaking. He questioned if they could produce from any mine three men who would serve them so honestly and faithfully as the agents had. They had given 580*l.* a share dividend since in the mine, and the extent of the call now made was 8*l.* 10*s.* a share. He firmly believed if they had chosen they need not have made that call. He hoped they would appreciate their faithful services, and not turn them away just like dogs from the door.

Capt. TEAGUE had no wish to dispense with the agents, and would be equally satisfied if his motion were lost or carried. He did not think that that was an occasion for personalities, and what he said was that, in his opinion, the time had come when it was necessary for the well being of the mine and the district—he might be right or wrong—to take the step he had taken that day.——The CHAIRMAN stated that the mine had given dividends amounting in all to 234,000*l.* He thought the ores sold should have been credited at the last account, and then the accounts would have looked much better.

Mr. VATCHER said that it would be an act of indecency to turn the agent away. Would Capt. Teague have liked to be so served when he was an agent?——Captain PASCOE (one of the agents): I refuse to accept the thanks of the adventurers or the month's money either.——Mr. VATCHER: It is an insult.——Capt. TEAGUE said he would withdraw the resolution about the agents, and thereupon tore is up.

It was suggested by several that Capt. Teague should assist the agents in any way he could, and it was suggested by Mr. LANYON that he should be appointed consulting manager.

Capt. TEAGUE denied that he ever wished to come into the mine. His time was pretty much occupied, and he did not think he could have anything to do with it in the manner Mr. Lanyon had suggested. If he could see his way clear to that he should have no objection. Capt. Teague, although he could not withdraw the resolution, it having been carried, promised, as far as he was concerned, not to act on it.—The meeting then terminated.—*Western Morning News.*

GREAT SNAEFELL MINING COMPANY.

The annual general meeting of shareholders was held at Douglas, Isle of Man, on Wednesday,

Mr. H. B. NOBLE (chairman of the directors) in the chair.

The SECRETARY read the notice convening the meeting, and the other preliminaries having been disposed of, the reports were submitted.

The directors' report expressed satisfaction at the great improvement of the mine in depth, its importance, and value, which could not be over-estimated. The ore produced in the 74 fm. level was of superior character to that produced in the levels above, and sanguine expectations were entertained that the 85 fm. level would shortly prove the same deposit of ore to be settling down in depth. This result, if realised, would establish the future of the mine as a property of great value. The extension of ground for new washing-floors and machinery was fast drawing to completion.

The CHAIRMAN, in moving the adoption of the reports, said that the most sanguine hopes that the mine would improve in depth had been realised, and rocks of ore from 3 to 4 cwts. each were being broken out of the 74, and as the strata in the 85 were fully as good as, if not better than, in the 74 there was good reason to hope that similar results would follow in that level. If such should be the case they might safely congratulate themselves upon having established a permanently valuable property. The 25, which was in whole ground to surface, had also greatly improved during the last month.——The motion, having been seconded by Mr. CORBETT, was unanimously adopted.

The CHAIRMAN observed that the next matter for their consideration was the re-election of directors, himself and Mr. Lomax being those who retired by rotation.

After some discussion Mr. Noble was re-elected, and it was determined to appoint Mr. Corbett in the place of Mr. Lomax, it being thought that as Mr. Corbett was resident he would be better able to look after the interests of the company than Mr. Lomax, who resided at Bolton. Mr. James Haining was re-appointed auditor.

Mr. ADAMS, in proposing a vote of thanks to Capt. James for his management and development of the mine, referred to the absence of exaggeration from Capt. James's reports, and said he had given most perfect satisfaction to the directors in every branch of his duties. Mr. Adams expressed confidence that in Snaefell they had almost excellent valuable property.

Capt. JAMES, in returning thanks, said that the more he saw of Snaefell the more he felt confidence in its ultimate success; as they went deeper they got into firmer strata, and the lode became more firm, compact, and mineralised. The mine was one that could be worked cheaply, and he felt confident would return good dividends.

The meeting concluded with the usual complimentary votes.

THE ELGAR SILVER-LEAD MINING COMPANY.

The statutory meeting of shareholders was held at the offices, on Tuesday, Mr. F. E. BINGLEY in the chair.

The SECRETARY having read the notice convening the meeting,

The CHAIRMAN said they were met that day in compliance with the Joint Stock Companies Act, which required the first general meeting to be held within four months of incorporation. The time since the company commenced operations being so short the directors, beyond what had already appeared in the mining papers, had very little to communicate. The works were proceeding very satisfactorily, as would be seen from the following brief reports of the manager, dated respectively Oct. 29 and Nov. 13:—

"Our shaft is going down as fast as nine men can sink it, and they are making fair progress. I have put four men to drive west from the cross-cut 3 fms., to come under the perpendicular of the shaft, after which they shall rise to meet the shaft. As soon as this communication is effected we will drive the deep adit level on the north lode, towards the Monydd-Gorddu boundary: the height of backs in the present end is 25 fms., and I have no doubt there are scores of tons of ore between that and the surface. Our buildings (office, store-room, smithy, and carpenters' shops) will be up in another three weeks. Everything goes on satisfactorily." "We are sinking the new shaft with all speed possible: it is now down 7½ fms. We have four men cross-cutting to come under the shaft. As soon as the perpendicular is reached we shall at once rise to meet the shaft. Our buildings will be completed and slated by another fortnight." The shaft would ventilate the levels, and the men would at once proceed to drive eastward towards the Monydd-Gorddu boundary. At that end there were still 60 or 70 fathoms to drive on the lode, and if that should prove of equal value to the 60 fathoms already driven, and there was everything to warrant this expectation being entertained, they would have substantial reason for being well pleased with that portion of their property; and, indeed, so far as he (the Chairman) was able to judge from personal observation and inspection, and from the unanimous opinion of several eminent mining authorities, the Elgar Mine when fairly developed would scarcely be second to the richest of the many rich mines in the neighbourhood.

The CHAIRMAN, in reply to a shareholder, further stated that the Elgar Mine had at least two fine lodes running through the whole sett, one of them, the Elgar lode (acknowledged to be one of the most masterly lodes ever seen near the surface), and the other the Pen-y-Cefn lode, yielding a large percentage of silver. The manager of the adjoining mine, Court Grange, in his report published last week, states:—"The ground in the Elgar cross-cut is of a congenial character for a productive lode, and, as the Elgar lode traverses this portion of the sett in great size and strength, we have every reason to hope that we shall intersect it in a great course of ore." The Court Grange Company were expecting materially to increase the value of their already fine property by working the Elgar lode, which enters their ground from near the western boundary of the Elgar sett, and the shareholders were doubtless aware that the Monydd-Gorddu Mine, where the discovery of an immense deposit of ore has recently been made, and which has created quite a sensation, formed their eastern boundary; so that having already proved the great Elgar lode to be very rich for some 60 or 70 fms. between these two boundaries, there could be little or no doubt that for nearly a mile in length the two lodes would prove exceedingly rich, and produce an enormous quantity of lead ore for many years to come. He could, therefore, most sincerely congratulate the shareholders on possessing one of the most promising mines in the Principality, and he hoped that by the time of their next meeting their most sanguine expectations would be realised.

The usual vote of thanks to the Chairman terminated the proceedings.

NORTH TANKERVILLE MINING COMPANY.

A general meeting of shareholders was held at the offices, Austinfriars, on Tuesday, Dr. SIMMS in the chair.

Mr. FRANKLYN (the secretary) read the notice convening the meeting.

The report of the directors stated that all efforts to realise the expectations they have deservedly been led to form as to the value of this property have hitherto been unsuccessful. The favourable appearances at surface, and also down as far as the deep adit, might well have led the shareholders to hope for a continuance and an improvement of the mine in depth, and it is only just to say that the eminent mining engineers who have examined the property still entertain hopes of fresh discoveries at deeper levels. During the past year, at the request of some of the largest shareholders, the 14 fm. level east has been driven a still further distance upon its course, but the ground being hard, the work expensive, and the prospects of success daily poorer, this part of the work was discontinued, and the more willingly as the agent on the mine and the two captains called in to advise all protested against going further in that direction. In other respects the method of working the mine indicated by Capt. Powning, and approved of by Capts. Barkell and James, has been strictly followed. The sett has been carefully costeamed for fresh lodes, and some important discoveries have been made upon the Venus Bank, as to which the sense of the shareholders will be taken at the general meeting. The capital is exhausted, and the directors (with the object of testing the mine still further) have made themselves jointly and severally liable to the bankers to the extent of 500*l.* Further progress must now depend upon the shareholders themselves, and the board venture to express a hope that this meeting and the one to follow it will be more fully attended than the meetings held on previous occasions.

The CHAIRMAN said that in the old workings they had not met with any success whatever, nor could he, as an unpractical man, hold out any hope of success. Capt. Abraham James had twice inspected the mine—once in May and once in September—and he held out hopes that in depth profitable ground would be opened out. So far the plan of working recommended by Captain James had been strictly followed, and it appeared that the rich lode met with at surface had not been met with in the levels, although in the shaft the ground was mineralised and contained large veins of spar running in all directions. These might come in again, the formation being clay-slate, and not altogether barren ground. In Shropshire clay-slate was the stratum mineral was almost invariably discovered in, and if the development of this mine was to be continued it remained for the shareholders to suggest in what way the means were to be provided. As to the Venus Bank portion of the property, Capt. Powning had most carefully examined it, and a few months since cut a lode, which for a time presented favourable indications; he then discovered another lode, which seemed to hold in depth. With those few remarks, he proposed that the report and balance-sheet be received and adopted.——Major GEACH seconded the proposition.

Capt. POWNING explained that he had discovered two lodes in Venus Bank—the first about two months since, cropping out at surface about 4 ft. wide; a small chait was sunk upon it for 3 fms., when the lode "twitched" to 18 in., and was at present unproductive, and without sufficient prospect to justify its further development. His attention had been directed by an old miner in the district to a spot which had led to the discovery of a lode 3½ ft. wide, composed of carbonate of lime, white quartz, and protoxide of iron—a very strong-looking lode, presenting indications justifying the belief that they would be well rewarded by a continuance of the level. About 1000*l.* more capital would be sufficient to thoroughly test the Venus Bank—no machinery would be required, the ground was easy, and there would be about 50 fms. to drive, and about 6 fms. could be driven per month. The formation was clay-slate; there had been opened upon its course about 12 fms., and the formation was precisely similar to that in which were found the great productive lodes in the district. In about eight months this important piece of ground could be proved. The cost would be from 30*l.* to 40*l.* per month.

The CHAIRMAN said said there were 366 unissued shares, the directors had taken their proportion, but some of the shareholders had not taken theirs. After paying to-day's cost there were about 100*l.* left, or about two months' more costs.

The report and accounts were received and adopted.

Dr. Simms was re-elected director.

A vote of thanks to the Chairman and directors closed the proceedings.

At the conclusion of the business of the general meeting, an extraordinary general meeting was held, for the purpose of authorising or sanctioning the increase of the capital of the company, but in consequence of the small attendance of shareholder, was adjourned until Dec. 18 next.

SOUTH ROMAN GRAVELS MINING COMPANY.

The ordinary general meeting of shareholders was held at the company's offices, Austinfriars, on Thursday,

Mr. R. WILSON in the chair.

Mr. FRANKLYN (the secretary) read the notice convening the meeting, and the balance-sheet to May 31, showing a credit balance of 1433*l.* 13*s.* 9*d.*, together with reports (already printed) from Capt. Arthur Waters and from Capt. J. W. Powning, the agent at the mine.

The CHAIRMAN said that since the previous meeting they had commenced working in the southern part of the property, and it was there that they were getting the best results. The cross-cut driving towards the Roman lode had not yet proved successful, and Captain Waters was of opinion that it would be better at the present time to suspend that cross-cut. Their agent, Capt. Powning, was present, and would answer any questions the shareholders might put. He ought to mention that the meeting would have been called earlier, but that they had been hoping to cut the Roman vein, and as they had not done so it could not be longer delayed. The Shelfield portion of the property was worked some years ago by Mr. Jones, and an engine erected upon it, but for some reason which he did not know the work was discontinued, and the engine removed to Tankerville. He concluded by moving the reception and adoption of the report and accounts.

Mr. PETER WATSON remarked that Mr. Jasper More, the lord of the soil, was present, and would, no doubt, favour the shareholders with any particulars they might desire.

Mr. BROWNE enquired the amount of the outlay that had been made upon the cross-cut, and what work had been done there?

Capt. POWNING said that the length driven was 127 fms., and the total outlay had been about the sum of 1400*l.* or 1500*l.* There would be 24 or 25 fms. more to drive in the cross-cut to reach the Roman lode, and as this was only a question of 250*l.* to 300*l.* he would recommend that it should be done. Considering the tearing of the Roman Gravels vein, he thought they would have that distance to drive. They would have a quarter of a mile beyond the lode, and half a mile on its course. At the open-cut in Roman Gravels the lode changed its direction about 25°, and was then running about 25° west of south.

Mr. J. Y. WATSON believed they had as rich a mine as they wanted in Shelfield without considering the lode in the cross-cut.

The CHAIRMAN remarked that if they worked both portions of the mine they would require a separate engine for each, as the workings would be so far apart.

Capt. POWNING said that at Shelfield in their deepest workings the lode was looking well; it was a good carbonate of lime lode, 5 ft. wide. They had 8 or 10 fms. to drive to reach the ore seen in sinking.

Mr. PETER WATSON observed that all who had seen the lode agreed that at surface a better lode had not been seen in Shropshire, and it was a question for the shareholders whether they would provide the necessary capital for developing it.

Capt. POWNING had no doubt of there being a rich mine, and he thought that with 5000*l.* more they would be able to open up the ore to the satisfaction of all parties, and bring the mine into a profitable state.

Upon the resolution being put to the meeting, the reports and accounts were unanimously adopted; Mr. R. Wilson was re-elected director, and Messrs. Stewart and Lambe were re-appointed auditors.

The meeting was then constituted an extraordinary meeting, and it was resolved to increase the capital of the company by the issue, *pro rata* to the shareholders, of 6000 new shares of 1*l.* 10*s.* each, at a price of 1*l.* per share, 10*s.* to be payable on Dec. 1st, and 10*s.* on Jan. 1st. The shares are to rank in all respects with the original shares, and as fully paid.

The CHAIRMAN remarked that the directors were prepared to take their quota of the new shares, and he could also state that one holder of 1000 share was prepared to do the same.

The resolution was unanimously agreed to, and the usual complimentary vote terminated the proceedings.

WHEAL PEEVOR MINING COMPANY.

A general meeting of shareholders was held at the mine, Nov. 21 (some details of which appeared in last week's Journal),

Mr. THOMAS PRYOR in the chair.

The accounts showed a debit balance of 1991*l.* 2*s.* 2*d.*

The agents' report concluded by stating—"We find that the lode is at the 53, and as far below as we have seen is standing to the south side of the engine-shaft for at least 8 ft. wide, for scores of fathoms in length, the whole of which, so far as we have been able to prove, produces good saving work for tin, and now the drawing shaft is completed below the level renders it at once available for taking away at, we believe, a good profit. Besides this, there are many hundreds, if not thousands, of tons of stuff lodging on the old stulls, nearly 200 tons of which we have already drawn to surface, that will produce, on an average, 30 lbs. of tin to the ton of stuff. This of itself, in our opinion, speaks well for the prospects of the mine, and strengthens our confidence in finding the lode in the bottom quite equal to the reports."

The reports and accounts were unanimously adopted.

The CHAIRMAN said that some of the largest shareholders were in favour of making a call sufficient to pay off the whole of the debit balance; but the accounts were brought up thoroughly close, and as it was confidently anticipated that in the coming three months the costs would be reduced, whilst the returns would be increased, it was not thought necessary to make a greater call on this occasion than was made at the last meeting.——A call of 10*s.* per share was accordingly resolved upon.

The CHAIRMAN said he thought the meeting would agree with him that their prospects were now, if possible, more cheering than they had ever been before. They had hoped to have reached the bottom of the mine ere this, and the meeting was postponed in that anticipation; but they had had very considerable difficulties to contend with in cutting down and lengthening the shaft, and the consequence was that the bottom was not yet reached. But it seemed now to be very near at hand, and, from what he had seen himself and heard from others on all sides, he was more than ever convinced that those who had so well and publicly stuck to the mine would have every reason to be satisfied with the result. He had a large interest in the mine himself, and so had his friends, and they intended to retain that interest until the bottom had been reached, and the value of the mine proved. In connection with Wheal Peevor there were many sources of gratification, which, in these days of great depression, was something to boast of. The first was that they had an excellent lot of shareholders, who had with great promptitude and readiness paid up the large sum of 11,000*l.*, with only about 150*l.* in arrear; the other was that in spite of all these calls there had not been a single relinquishment; and, in the third place, it was especially gratifying to know that all the rumours which had been circulated to the effect that Wheal Peevor would be drowned by the abandoning of the adjoining mines, had turned out to be utterly unfounded.

Capt. ROGERS stated that a much more favourable report would have been presented had it not been for the miserable shaft which they had had to contend with. It was nothing more or less than an air-hole, and it was hardly possible to imagine how it could have been sunk. He had seen it stated in the newspapers that if they could have foreseen the condition of that shaft it was very likely that they would have placed their engine in the old engine shaft; but for himself he had never held two opinions on that subject, and he had no hesitation whatever in saying that the engine was exactly where it out to be, even if it had cost them more money and a longer time to sink it. (Hear, hear.) It was right in the centre of the mine, and would go down to the deepest point and in the very heart of the tin ground, whereas if the engine had been placed at the old engine shaft it would have been at the extreme end; it would have rendered their progress slow and expensive, and would have been a mistake in every respect. Notwithstanding the time they had taken in reaching the bottom of the mine, his confidence had never for a moment been shaken—but it was rather strengthened as they proceeded—and he strongly advised the adventurers to continue in the mine, because he firmly believed that they would be well rewarded for the outlay they had made. He did not give this advice for the sake of his salary, for he had lost more than he had ever received, and if he did not feel convinced that he should have his money back again he should not continue to go on working for nothing. He was satisfied that they had a great mine there.

A vote of thanks to the Chairman terminated the proceedings.

[For remainder of Meetin gs see to-day's Journal.]

VIRGINIA: ITS ATTRACTIONS TO THE CAPITALIST AND THE EMIGRANT—No. VIII.

ITS PRODUCTS AND AGRICULTURAL CAPABILITIES—(*concluded.*)

In our last number on our way west we left our readers at the foot of the Blue Ridge, a splendid range of mountains which divides the Piedmont Country from the great valley of Virginia. This range extends for about 300 miles in a north-east and south-west direction, and forms in every direction a magnificent background to the landscape. Most of the rivers which rise in this range run east, but the Potomac takes its rise further west in the Appalachian Chain, and passes in its eastward course to the sea through a natural gorge in the Blue Ridge Mountains at Harper's Ferry, a name familiar to all conversant with the events of the late sad war. Harper's Ferry is a locality of singularly picturesque beauty. The general elevation of the Blue Ridge in these parts is about 2000 ft. above the plain, but further south and towards the west it sometimes reaches an elevation of upwards of 4000 ft. above the sea level, and from its beautiful varied outline and deep blue colour forms a very striking feature of the landscape from whatever point it may be viewed.

The rocks forming the Blue Ridge on its eastern slopes are primary, or azoic, with various kinds of schists, and near the top, this side, of an intensely hard variety of greenstone, which greatly delayed the progress of the railway from the difficulty and cost of tunnelling through it. The Hoosac Tunnel, for instance, occupied many years in its construction. Crossing this mountain range we descend by degrees its eastern slope into the great valley of Virginia over Potsdam sands, once the bed and shore of an ancient ocean which covered the extensive valleys of the Mississippi and the Ohio to the west. The great valley of Virginia occupies the space between the Blue Ridge and the eastern ranges of the Appalachian Chain: its bed is of Silurian limestone. This valley is in these parts called Shenandoah, and is celebrated for its fertility and for the terrible scenes enacted in it during the late war. Here was the theatre of the exploits of one of the most determined and successful of the Northern Generals. He marched his army through it, torch in hand, destroying everything as he went, and when his savage work was done he made his remarkable report that he had so thoroughly executed his orders and devastated the country that if a carrion crow wished to cross it he should take his knapsack on his back. Such is war! but such is the enterprise of its inhabitants, and such the fertility of the soil of this region, that when the writer passed through this valley in the spring of the present year no trace of the devastating havoc of the demon of war was visible. It is to be hoped that the bitter feeling engendered by this now celebrated march may be equally transient. It had at least the effect of closing the disastrous conflict, and forever putting an end to slavery in this one of the fairest portions of God's earth.

The Valley of Virginia is the native home of the vine, which here grows in great luxuriance, and much brandy is distilled from the grapes by the local farmers. It is, indeed, on record that during the war one man made 11,000 gallons in one year. Numerous and extensive vineyards are now in cultivation, and yield an abundant produce to reward the labour of the husbandman. Hundreds of thousands of acres, with a soil admirably adapted for the vine, in a climate highly favourable for maturing the fruit, are available for this profitable field of enterprise. As before stated, it is rich in all the agricultural produce of the temperate zone, and offers great inducements as a home for emigrants. All the fruits and cereals mentioned as growing in the more eastern part of the State also flourish here in perfection, while the side valleys formed by the spurs of the main ridges of mountains add the charm of an endless variety of beautiful scenery as well as of health-giving and invigorating mountain breezes. The scenery from the railway cars, as they pass along, winding amongst the spurs of the several mountains, discloses openings of the richest sylvan landscapes imaginable, often of great extent, with rivers winding through them. After passing the Appalachian range, the watershed is towards the west, and all the streams run towards the great valley of the Ohio and the still greater one of the mighty Mississippi.

We must delay our journey for a moment at White Sulphur Springs, a watering-place of which the Americans are justly proud. There is a railroad station at the springs, which in the summer is the resort of thousands who are in quest of health or pleasure. Nestling amongst lovely mountains, with walks and drives all around, a more charming and healthy retreat cannot well be imagined. The mountains are covered with magnificent timber, and all the streams bordered with rhododendrons, calmias, and other flowering shrubs, growing wild in the utmost profusion. There is in the grounds the usual large hotel, making up hundreds of beds, with cottages all round the park-like enclosures, a large ball-room, concert-rooms, and all that a most skilful caterer can find to attract and amuse the pleasure-seeker from the crowded and overheated great cities of the eastern seaboard.

Passing still westward, after journeying along the Greenbrier River we enter the canyon of the New River, and come at last to the Kanawha Falls, which are most romantic and beautiful, and offer water-power and sites for the erection of manufactories in the heart of the coal district. The mountains all the way are clothed with the most exuberant growth of vegetable life, but as this runs down mostly to the water; it is only on the plateau that there is room for farming operations, and there farming is carried on to perfection. The height of these plateau ranges generally from 1000 to 1500 ft. above the valley below, moderating the heats of summer, whilst from the southern lattitude, which is about that of Constantinople or Naples, the cold in winter, though far greater than in the valleys below, is never very severe for any length of time, and, doubtless, ere long the whole of this valley will be inhabited by an enterprising race of farm settlers, for which it offers many and great inducements scarcely to be exceed elsewhere. It is scarcely credible that the tide of emigration should flow to the Far West and North, where the summer is short and the thermometer is often 40° below zero in mid-winter, while there are unsettled lands to be held at reasonable prices in this lovely valley, only 300 or 400 miles by railway from the Atlantic seaboard, and only 10 or 12 days at most from England.

Passing still west we come to the thriving town of Charleston, which is now the capital of West Virginia. Here is the seat of Government of the State, and the town is already adorned with many fine buildings, but unfortunately the railroad is on the opposite side of the river from the city, which is here both deep, broad, and rapid, and is crossed by a steam ferry. The scenery here is very pretty, but the hills are not so high as further east, and the plateau not more than 500 or 600 ft. above the river. The cleared parts are mostly farms, and highly cultivated, and covered with peach and other orchards, which when in bloom add greatly to the beauty of the scene. Going onwards west from Charleston the country assumes more of a level character, and by degrees, as we approach the confluence of the Kanawha and the Ohio, we leave the hills behind. There is no town until we reach Huntington, named after the president of the Chesapeake and Ohio Railway, of which line it is the western terminus, and to which it owes its existence. It is situated near the confluence of the Guyandotte with the Ohio, on the east bank of the latter, which opens up 20,000 miles of inland navigation.

Here the passengers for Pittsburg, Cincinnati, and the other cities on the great inland waterways embark, and at small cost are conveyed in large floating hotels to their destination. Here also the trade of the great manufacturing centres, to which the coal and iron of the Kanawha and New River must shortly give rise, will also embark in friendly rivalry with Pittsburg, the Black Country of Pennsylvania. Already 16 or 17 iron furnaces are in course of erection, but as the river navigation is not quick enough for our American cousins, railroads are already projected down both banks of the Ohio to Cincinnati, &c. We spoke just now of the "floating hotels" to be seen on the American rivers. These steamboats are unlike any others that we know of. They are purely American institutions, and offer great facilities for travelling. They are of small draught of water, with enormous side-wheels, or paddles. There is a large saloon, or drawing-room, occupying the greater part of the main-deck, with cabins all round, in some vessels making up 500 or more beds, with bridal chambers gorgeously fitted up. Above these there are what are called hurricane decks, and, above all, the enclosed compartment for the captain and steering apparatus, the orders being given to the engine-room by telegraphic arrangements. With their smoke-stacks these structures are very picturesque objects in these great highways of inland navigation.

Here we leave Virginia, but before quitting it we must just add one word about Huntington. Before the opening of the railroad in the spring of this year it was, as the Yankees would say, no where, It was laid out scarcely three years ago, yet it is already a considerable town, with magnificent river-side quays and depôts for the goods and passengers brought by the railway. It is laid out, like all modern American cities, on a regular plan, the avenues and streets being at right angles to one another. The sites for the court-house, markets, churches, and all other public buildings are in the most suitable situations, and all the town lots for houses are arranged in numerical order. Before any of the lots are sold or let conditions as to building are arranged, and the future town is perfect on paper long before the town is built.

Having concluded our rapid sketch, we thus for the present take leave of the Old Dominion, a name which the inhabitants, as we have already stated, still love to apply to the Two Virginias.

FOREIGN MINING AND METALLURGY.

The Montigny Ironworks are now completely idle; the blast-furnaces have been blown out, and the rolling-mills have been stopped. The South of Charleroi Metallurgical Company has also decided to blow out a second blast-furnace; the necessary arrangements are being made for its extinction, and the works will be entirely idle in the course of a few days. There are now only 29 blast-furnaces in activity in the arrondissement of Charleroi, as compared with 30 at the commencement of this year, showing a reduction of one-third. If the tone of the Belgian iron trade is not worse, it cannot, in presence of such circumstances as these, be said to have improved. Prices have certainly not fallen, but orders continue to make default. The basis price for merchants' iron remains at 10*l.* per ton. Rails have been dealt in at very variable prices, and no transaction of importance has been concluded. As regards plates, the state of affairs has not varied materially during the last fortnight. At Liége the blast-furnaces are kept well employed, but stocks of pig are accumulating, and are acquiring quite dangerous proportions. The Sclessin Company has, it is said, adapted one of its blast furnaces so as to render it available for the production of Bessemer cast-steel. MM. Iowa, Delheid, and Co. have been authorised to erect six additional steam-engines at their works. The Sclessin Blast-Furnaces Ironworks, and Collieries Company will pay on the 1st prox., a second dividend for 1872-3, at the rate of 1*l.* 6s. per share.

Affairs have continued quiet in the French iron trade; there has been scarcely any change to report in quotations. In the South of France the activity in affairs has not slackened, but some of the other metallurgical centres of France exhibit torpor and depression. The Haute-Marne has still a tolerable amount of work on hand, but this is simply due to the fact that industrials are working out old contracts. The great works of the Loire are prosperous; most of them are even preparing to increase their means of production. The Creusot establishment has just acquired the Beni-Sufsuf and Gar-el-Baroud Ironstone Mines, situated near the embouchure of the Fafna, in the province of Oran, in Algeria. The Creusot undertaking is also assured new supplies of minerals as well in France as in Savoy. The rolling-mills, the steel works, and the construction workshops of Creusot are still in full activity. A company has just been formed for the purchase of the Chasse blast-furnaces in the Isère, and the El-m' Kimen Mines in Africa. The capital of this company will be 72,000*l.*; its office will be at Lyons. The Liverdun forges have been again brought into activity. At Paris some little uneasiness has been excited by the announcement that the Consultative Commission of the Paris Octroi proposes to impose very shortly a tax of 1s. 3d. per ton on iron and plates, of 1s. 8d. per ton on steel, and of 7½d. per ton on rough pig, old iron, and old castings. The moment seems badly selected for the imposition of such a tax, but then the Municipality of Paris must have money. The dividend of the Naval and Railway Blast-Furnaces, Forges, and Steel Works Company for 1872-3 has been fixed at 2*l.* per share, half being payable at once.

A fall is setting in in coal in Belgium. Industrial descriptions are 3s. to 4s. per ton cheaper; at any rate, many merchants have not hesitated to do business at this reduction. Consumers in the Charleroi group are only purchasing from day to day, notwithstanding the concessions which have been made. Stocks are accumulating in the Charleroi district, and coalowners are interested accordingly in making reductions in prices; those who make concessions, so as to secure contracts for a year and a half, will be the most prudent. The intelligence which reaches us from the Liége basin is to the effect that sales are being made at 1s. 8d. to 2s. 6d. and 3s. 4d. per ton below the currently quoted rates. The depression of the metallurgical interest severely affects the coke market, and important stocks of coke are indicated at a season of the year when such stocks do not usually exist. At Mons the coal market has also been weak. Upon the whole, the Belgian coal trade is decidedly weaker than it was during the summer, and further reductions in prices are looked for.

A slight advance is noted in the price of Saarbruck coal. The total production of Saarbruck coal in October was 404,694 tons; this was the highest monthly production yet attained.

A fall in prices is every day becoming more and more general in the French coal trade; orders are decreasing, notwithstanding the season of the year, and stocks are increasing, the deliveries having been considerable. English coal is freely offered upon the Paris market at 1s. per ton less than the coal of the Nord and Belgium. It appears tolerably certain that English coal has lost ground a good deal upon the Paris market, and that it has been largely displaced by foreign coal. The coal of the French departments of the Nord and the Pas-de-Calais has been displaced in the West of France and on the Channel coast by English coal. Some quantity of disposable coal exists, and this stock can but go on increasing, by the reason of the considerable development of the two basins, while the importation of Belgian coal into France has been declining; eight English ships, laden with English coal, are stated to have entered the port of Dunkerque in two days. The Eastern of France Railway Company has definitively concluded a contract with the administration of the Saarbruck mines for the delivery of 120,000 tons of Saarbruck coal annually, during a period of ten years. A committee, formed at Lille, has just addressed to the commission appointed to enquire into the coal question in France a very clear and interesting report. The Lille committee proposes, first, that coal-mining companies should be required to sink a number of pits, bearing a due proportion to the extent of their concessions; secondly, that they should employ all the mechanical apparatus which modern science has placed at their disposal; thirdly, that they should increase the number of workpeople by the means adopted in England and Belgium, such as the construction of houses, the employment of recruiting agents, the giving of premiums, &c.; and fourthly, that the holders of concessions which are suffered to remain inactive, should be required either to immediately work their concessions or to abandon them. The number of inactive concessions in the port is nine out of twenty-two. The French coal commission has received at present 415 replies to its questions, or a little less than 6 per department. The period prescribed for the reception of replies expires Nov. 30. M. de Clerck, engineer-in-chief of mines in the department of the Nord, which comprises the Anzin, Duchy d'Azincourt, and Aniche mines, has just addressed to the prefect a report on the course of local mining affairs during 1871. It appears from M. de Clerck's report, that the extraction of 1871 exceeded that of 1870 by 225,600 tons. The progress realised in 1872 was more than double.

MAMMOTH COPPEROPOLIS BULLION.—The Mammoth Copperopolis mill, which was tried some little time ago on the ore of that mine, but failed to do satisfactory work, was started up again last week under the charge of Mr. W. F. Belding, and is now pronounced in every respect successful, doing its work well and satisfactorily. Mr. Belding showed us some sample bullion yesterday, one pan having been run as an experiment. An interesting little bar of a rich creamy colour contained $100 in gold and about $12 in silver; another was valued at $30 in gold and $4 to $5 in silver. This latter was from low grade ore without sorting. Selected ore shows $63 mixed gold and silver. The bullion is from 950 to 963 fine. Next week the mill will commence for steady work. There are thousands of tons of this ore on the dump, enough to last a couple of years or more, taken from the streak running through the copper.—*Salt Lake Herald*, Nov. 5.

SIERRA BUTTES GOLD MINING COMPANY.

So many of the American mining enterprises introduced on the London market have proved such disastrous failures for those who risked their money in what was temporarily believed by a large number to be the best class of mining adventures, that not only has this outlet for speculation been absolutely closed, but the very name of American mining has become a byword for everything that is bad and insecure. It must be acknowledged that the picture is an extremely dark one, and little variety of colour is to be found in it save in the varying shades of blackness. Under such circumstances it must be a source of gratification to anyone who can point to an American mine which has proved itself to be not only an exception but a brilliant one to the ordinary run of ill-luck which has attended Pacific Coast adventures. It is believed that with truth such a statement may be made respecting the Sierra Buttes Mine, which was one of the earliest introduced to the London public. It is situated in Sierra county, California, on the Sierra Nevada range of mountains, at an elevation of about 5000 ft. above the level of the sea. From the United States Government official reports it appears that this mine was discovered in 1851, and the first mill erected in 1853; it is not, however, till 1857 that any reliable figures can be obtained of the annual produce of the mine, which for the year named was $51,000, while in 1868, 12 years later, it had risen to $229,000. The total yield from 1857 to 1858 inclusive amounted to the large sum of $1,841,000, of which $1,139,000 were paid to the owners as dividends, while it is stated that the cost of all machinery, improvements, &c., was provided for out of revenue. This mine, therefore, shows an uninterrupted career of success, and from the year 1857 down to the date of its acquisition by the existing company no single year passed over without the payment of dividends, though varying in amount. The year 1864 appears to have been the least beneficial to the owners, owing to its having been a remarkably dry season, which was felt severely throughout the State, and the profits made were largely applied in securing a more effective water supply. But notwithstanding this disadvantage dividends continued to be paid. In June, 1870, this property changed hands, and passed into the ownership of an English company, which was among the earliest of the organisations under the Limited Liability Acts of 1862 and 1867, for the purpose of acquiring and working a mining property in California. Enquiry at the company's office has placed the following figures at disposal, which are extracted from the published accounts, and which relate a continuance of the prosperity enjoyed for so many years by the former proprietors. The produce of the mine has been as follows:—

1870—Second half, ending Dec. 31	$	103,300
1871 " "		390,200
1872 " "		387,000
1873—First half, ending June 30		206,400
Making a total of	$	1,086,900

as the result of exactly three years' operations. During that period eleven quarterly dividends of 5 per cent. each, or 2s. per share, have been distributed among the shareholders, making a total amount returned to them of 96,250*l.*, a result so satisfactory that it stands at present unparalleled in the history of recent American mining ventures. This is exclusive of the amounts which have been diverted from profits to payments for certain improvements in, and additions to, the machinery, and which appear to amount to a considerable sum in the aggregate. All things considered, it would appear that the original representations which were made respecting this property prior to purchase by the company have been fairly and satisfactorily fulfilled. Recent explorations in depth have demonstrated the continuance of ore downwards, and it is in contemplation to test this question still further by starting a new or seventh level some hundreds of feet further down the hill than the present lowest tunnel. Should this point be settled affirmatively, which there appears no reason to doubt will be the case, it will remove the mine from the region of contingency to that of certainty. It is stated that the returns for the last two months have been somewhat smaller than customary, which is explained by a general though unusual scarcity of water throughout the State of California, and though it is possible the return for the present month of November may also be small, yet this is only a temporary drawback, which will be obviated as soon as the fall rains set in, and has no connection with the intrinsic merit of the mine. The existing measurable reserves—that is, quartz which has been opened, and can be measured on four sides—are estimated to be sufficient to supply the present mills, aggregating 86 stamps, for about three years. In addition to this an enormous quantity of ore ground has been opened up on one, two, or three sides, but as this is not enough to comply with the conditions of measurable reserves it is not included in the resources of the mine. It is, however, believed that sufficient ore exists to supply the mills for 10 years to come at least, while it is the opinion of those who know the mine that it is practically inexhaustible.

MINING IN AUSTRALASIA—MONTHLY SUMMARY.

DISCOVERY OF COAL.—We are happy to hear that a discovery of coal has been made on the Murray Flats, about 12 miles from Angaston, near Mr. Keynes's run. We understand that an application has been made from an Angaston resident to the Government for the block, which is at present Crown lands, and that the Surveyor-General has been up to examine and report on the find. The coal has been brought into Angaston and tested, and, though rather dull in colour, it was found to answer its purpose when tried in a smith's forge. Should this discovery prove to be of any extent, and as good as anticipated, it will be more beneficial to the colony than can at present be conceived, as it will develope so many other industries. As the Government have offered a reward of 5000*l.* for the discovery of a good coal field, the finder is likely to make a good thing out of this.—*Kapunda Herald.*

THE MOONTA.—In the 12th annual report of the premier mine of the colony the directors are in the satisfactory position of being able to congratulate themselves and their co-proprietors upon the continued productiveness of the company's mines. The statement itself deals chiefly with the operations of the half-year ended Sept. 20. Compared with the preceding six months there is a noticeable improvement in the production of the property; but there is no corresponding increase in the profits, owing to the fall in the price of copper. The ore raised during the period in question reached the large quantity of 11,080 tons, of which 9153 tons averaged 21 per cent., and 2827 tons 5 per cent. Two dividends of 1*l.* each per share, making a total sum of 64,000*l.* have been paid within the six months under review. Capt. Hancock enters into a detailed description of the operations which have been carried on in no less than 27 shafts, and from this we note that the general yield is from 2 to 7 tons of ore per fathom, giving an average percentage of 15 to 30 per cent. The sum of 7000*l.* has been expended in the purchase of machinery and plant, which are stated to be required for the economical working of the mines. The various surface arrangements are being carried on in an efficient and harmonious manner, while underground the numerous lodes continue to present satisfactory and encouraging prospects. The company's establishment at the mine consists of 18 officers, 905 miners, 55 mechanics, 267 labourers, 211 boys, with three officers in Adelaide, making a total of 1429 persons employed in developing the resources of this one property. From an examination of the accounts of the company we note that the sum of 140,558*l.* 19s. 5d. has been realised during the half-year from the sale of copper ore, to raise which was involved an expenditure of 81,532*l.* 19s. 6d., thus giving a net profit of something like 60,000*l.* The gross assets of the company are set down at 163,257*l.* 7s. 11d., the chief items in which are—Estimated value of buildings, fixed machinery, &c., 111,290*l.* 6s. 11d.; and estimated value of 2659 tons ore on hand, 37,224*l.* There appears to be little diminution in the yield from the various shafts, and fresh discoveries are constantly being made, so that we may fairly anticipate for some time to come budgets quite as satisfactory as the one we have now the pleasure of noticing.—*South Australian Register.*

AUSTRALIAN MINES.

PORT PHILLIP AND COLONIAL (Gold).—The following advices have been received from the resident director, dated Clunes, Oct. 7: The quantity of quartz crushed during the month ending Sept. 10 was 5078 tons; pyrites treated, 28 tons; total gold obtained, 1037 ozs. 6 dwts., or an average per ton of 4 dwts. 2 grs. The receipts were 3974*l.* 14s.; payments, 3723*l.* 17s.; profit, 250*l.* 17s., to which was added last month's balance of 428*l.* 15s. 7d., making a total of 679*l.* 12s. 7d., which was carried forward to next month's account. During the three weeks ending October 1 the quantity of quartz crushed was 3825 tons; total gold obtained, 654 ozs. 4 dwts., or an average per ton of 5 dwts. 10 grs.

SCOTTISH AUSTRALIAN.—The directors have advices from Sydney dated Oct. 6, with reports from the Lambton Colliery to the 4th of that month. The sales of coal for the month of September amounted to 14,955 tons.

ENGLISH AND AUSTRALIAN (Copper).—Port Adelaide, Oct. 10: The stock of coal at Port Adelaide and afloat was about 1650 tons. At the Port Adelaide Works there were four furnaces roasting, three furnaces smelting, and one refinery at work, and at the Newcastle Works three furnaces roasting, two smelting, and one refinery.

ANGLO-AUSTRALIAN (Gold).—Capt. Raisbeck, Oct. 9: I have the honour to report progress since the 8th ultimo.—East Shaft: We have sunk in this shaft since the above date 16 feet—we have had to contend with a strong bar of sandstone the greater part of the month, but are now through it on the west side of the shaft. There is a dark blue slate heavily charged with mundic coming in from the west. I expect easier sinking for a time—our water has increased one third; present depth of shaft 368 feet.—Prospecting Shaft, south end of hill: Since we were obliged to stop sinking in this shaft I have let on tribute a small leader 60 feet from the surface. The company receive 40 per cent. of gross yield. They have crushed 5 tons, result being 5 dwts. per ton. They have driven 15 east across the leader; from the present appearance of the stone it will pay. This shaft is placed in the same channel of ground as Ferron's No. 2 shaft (see my report annexed), but being in a more elevated position by 40 feet; you will see by the dip of their stone, the position of the shafts, and the distance apart, this shaft must be sunk considerably deeper to attain the required depth. It is a pity this shaft had to be stopped, as we are losing the best season of the year for sinking a shaft of this description. I have had permission to examine the underground workings of the Ferron's Reef Gold Mining Company. The north boundary of their lease is adjoining the south boundary of our lease. Their engine-shaft is placed adjacent to the eastern lode, and 400 feet from our south boundary; this shaft is sunk 195 feet, the last 25 feet through good payable stone. Their No. 2 shaft is west of their engine-shaft, and sunk 191 feet (water level). There is an immense body of payable stone in this shaft. They are sinking another shaft 250 feet from our boundary in the same channel of ground as their No. 2 shaft is placed. As their battery of ten heads is insufficient to crush the quantity of stone they can raise, they are erecting a new battery, which will cost from 4000*l.* to 5000*l.*, and their present prospects will warrant the undertaking. The declination of all their stone is north 1 foot in 10.

QUICKSILVER.—A new discovery of quicksilver is attracting attention in California, which it is thought will add materially to the world's supply of this article. The locality is about 150 miles south of the New Almaden Mine, and is midway between the sea and the mountains. A company from Nevada have "located" the mine under the law of Congress, and have already set men at work to develope it. All the cinnabar mines in California have heretofore aggregated a yield of 2,000,000 lbs. a-year, but hereafter, when the new claim is effectually worked, this will be materially increased.

Lectures at the Royal School of Mines.

ON HEAT.

Prof. GUTHRIE, Professor of Physics in the Royal School of Mines, commenced a course of Lectures to Working Men on "Heat." These lectures are delivered in the Lecture Theatre of the South Kensington Museum, are fully illustrated by experiments, and are very well attended. The following is a report of the first lecture of the course:—

Twenty years ago the term "force" was used in a somewhat different sense from that in which it is used now. Then the term force was used in the sense in which we now use the term "mechanical force," or "physical force;" then force was used synonymously with pressure. Now we look upon matter as having different states or conditions, and whatever affects these states or conditions is called force. Thus, matter may change in position, and that which affects, or tends to affect, the position of matter is mechanical force or pressure. Again, matter has colour, and that which affects, or tends to affect, the colour of bodies is the force of light—none the less a force because it does not alter, or tend to alter, the position of the body in space. So without going through all the other forces, let us at once define Heat as that force which affects, or tends to affect, the temperature of a body. And here observe the difference of expression between *heat* and *temperature*—a difference upon which we shall have to dwell at length by-and-bye. A body is cold to the hand—that is, it has a lower temperature than the hand; warm to the hand—it has a higher temperature than the hand. If I plunge my hand into a pint of water of higher temperature than my hand, I feel the sensation of warmth: suppose that I plunge my hand into a quart of water at the same temperature as before, I shall not feel a higher temperature, and yet it is very evident that the quart contains twice as much heat as the pint; hence the distinction between the heat which a body possesses and the temperature which it shows. All changes which we can recognise are ultimately referred to the organs of sense, but certain changes, changes effected by certain forces, may be referred to more than one of these organs. These organs have been called very effectively the five gateways of knowledge, the five apertures through which the external world affects the internal consciousness. The sensation of heat is recognised by the nerves spread over the body, which nerves also serve for the sense of touch. If the hand be plunged into water of blood temperature there is no sensation of heat; above that temperature we should call it warm or hot; below it cool or cold. In all these latter cases a passage of heat occurs, for though in the two last instances we speak of cold, we still recognise that sensation as similar in kind, but, as it were, different in sign. Heat may also be recognised indirectly by the sense of vision, from the property which it has, first, of increasing the lengths of bodies; and, secondly, of making them visible when otherwise they would be invisible by raising them to a temperature which causes them to emit light. Generally speaking, we may say that bodies expand by the action of heat—for instance, a cubic inch of matter, on being heated, expands in all directions; if we take a linear yard of matter that yard expands the same fraction of its thickness in all directions as it does of its length. If we take a long cylinder rod or wire, which expands one thousandth of its dimensions in all directions, if it be very thin, the increase in thickness will be inappreciable, but if it be very long the increase in length will be readily perceptible. Here is a long thin platinum wire, through which I will pass a current of electricity; the wire will not conduct the current freely, and, therefore, soon becomes red hot; that it expands in length is shown by an index fixed to one end of the wire, which was kept erect by the tension of the wire now falling. The wire also appears to expand in thickness; this, however, is due to what is known as irradiation.

Here is another instrument—Fergusson's pyrometer—to render sensible the expansion by exaggerating it. A rod of brass is fixed at one end, while at the other end it plays upon the short arm of a lever, the long arm of which works upon the short arm of a second; the end of the long arm of this last lever acts as the index, and moves over this graduated scale. On heating the bar the movement of the index declares its expansion. Here again is a sphere of copper, which in its present condition will easily pass through this metal ring. I heat the sphere for a few moments, and now it will no longer pass through the ring, but sticks fast; if I allow it to stand there for a minute or two the ring and the sphere will come to have the same temperature, and the sphere then falls through. Rings and all holes bored in substances which are heated expand outwards—that is, the holes increase in size. Here is an instrument which is known as a "rocker;" it is made of copper, and the lower face of it is made so as to have two ridges on it. If this be heated and laid evenly on a block of lead no motion ensues, because the arrangement is symmetrical, but if laid down so that one ridge touches the block first a little mountain of lead is raised, and the rocker is tilted over to the other side; a similar process here tilts it back again, and the successive taps thus given are rapid enough to give out a musical sound. These experiments, then, show that solid bodies are expanded by heat.

Now we will examine liquids, and will take water (coloured that you may see it more distinctly), alcohol, and mercury; here are three small flasks, with close corks, and a tube through the cork; each is filled quite full, and for a short distance up the tube, with one of those liquids. [I will now cast the image of the flasks in succession on the screen, and after having noticed the height at which the liquid stands in each, I will apply heat, and we will observe the effect.] In all three cases you will see the first effect is that the water appears to sink in the tubes; this is due to the fact that the glass flask which first receives the heat is expanded, and becomes of larger capacity; the level of the liquid, therefore, sinks, but as soon as the liquid is warmed it rises to some distance above its original level. This proves that liquids, like solids, are, generally speaking, expanded by heat. Now we will take two examples of gases. This flask is filled with air, and a tube passes through the well-sealed cork, and one end of it dips under this inverted tube, which is full of water. I heat the flask, and the first effect, as before, will be to expand the flask; the water will, therefore, rise a short distance up the tube; this is immediately followed by a great expansion of the air, bubbles of which pass up into the inverted tube and displace the water. If the heat be withdrawn as the air cools and contracts the water into which the tube dips will ascend up the tube, and perhaps reach the flask. If we take a cubic foot of air in a flask at the freezing temperature, and then plunge the flask into boiling water, the amount of gas expelled will be a rough measure of the amount of expansion of the gas between the freezing and boiling points of water. The other case we will take is that of a small Montgolfier balloon, which is held open over a chimney so as to be filled with the heated air and products of combustion issuing from the chimney. These products of combustion are chiefly carbonic acid and water, the former bearing the latter (as steam) lighter than air; we may, therefore, assume they counterbalance each other, and that the result is due to the air. The balloon is filled out, and on being released ascends; this is due to the fact that heated air is lighter than cold air. If we take a cubic yard of air and heat it if will expand, and become a cubic yard and something more; the weight of the air when expanded will be the same as before, but a cubic yard of the expanded air will be lighter than a cubic yard of the original air. A mass of matter in air or water is buoyed up by a force equal to the weight of fluid it displaces: if the weight of that fluid be greater than the weight of the body the latter will ascend in the fluid (cork in water); if less the body will sink (stone in water). Thus hot air rises in cold, but in a balloon the hot air has not only to rise itself, but to carry up with it an enclosing film. Therefore if the weight of the film, plus the weight of the air inside, be heavier than the total weight of the displaced air, the balloon will descend, but if it be lighter it will rise. Here is a small flask inverted, through the close fitting cork of which a tube passes, and down into the neck of a second flask, with a loosely fitting cork. The latter flask is partly filled with water, which rises to some distance up the tube. If I place my hand on the upper flask the air inside is warmed, expands and drives down the water in the tube. By observing the amount of expansion of the air in this way in the two cases I might ascertain, for example, which of my two hands, if either, was the warmest. But such an instrument will not do for measuring temperatures. Suppose I take the instrument from a hot room into a cold one, I shall find that the level of the water in the tube sinks, and thus I could not have a proper estimation of temperature. Then, again, there is a continual variation in the amount of pressure of the air, as shown by the barometer, and this would influence the height of the column of liquid in the same way as a variation in temperature; this, therefore, would not make a trustworthy thermometer; we must have one which is shut off from the external air. The cork of the lower flask in the above instrument is kept loose, that the air in that flask may not be compressed by the descent of the liquid, else this increased pressure would counteract more or less the fall in the level due to the increased heat.

This next instrument has two globes, connected by glass tubes, but shut off entirely from the air; both flasks are filled with air, the liquid being in a bend in the tubes. If both globes be similarly affected the level of the liquid will rise in neither arm of the tube, but if one be affected in a different manner from the other, as if I place my hand on this one and leave the other globe untouched, the level will sink in the arm of the tube connected with the globe I touch, and will rise in the other. This instrument, because it measures difference of temperature, is called a differential thermometer; if this instrument be carried into a warmer room, since both bulbs are equally warmed, the level of the liquid in both arms will remain equal. One of the first instruments employed for determining the amount of expansion of solids was Fergusson's pyrometer, which we used in a former experiment. If we take a bar of a certain metal, and surround it with ice, cold water, and then immediately afterwards with boiling water, we may ascertain roughly by this instrument the amount of expansion of the bar between the freezing point and the boiling point of water; if then a bar of a different metal of the same length as the first be taken, and the amount of expansion in like manner ascertained, we shall be enabled to compare the amount of expansion of the two metals. Such experiments were made and results obtained which, though only rough, were very accurate for such an instrument. If the length of a bar of the metal at the freezing point be taken as one, when heated to the boiling point of water, the length will become—Copper, 1·00172; brass, 1·001867; wrought-iron, 1·001220; lead, 1·002842. Here is a compound bar formed of a bar of iron, rivetted to a bar of brass; if now I lay the bar with the iron at the bottom, and heat it below, the iron being heated first, it will expand and bend in a curve downwards, but iron does not expand so much as brass, so that when the brass becomes heated the curve is reversed, and the brass occupies the outer side of the curve.

Another experiment will likewise show that brass expands more than iron with the same degree of heat. A bar of brass and a bar of iron lie side by side at one end, resting on a ledge, and touching a screw, connected with which is a wire from one pole of an electric battery. At the other end of the apparatus is a similar screw, connected with a wire from the other pole of the battery, which latter wire has in its course a piece of platinum wire, which will glow when the current passes. The bars of metal at present rest on a ledge near to, but not touching, the second screw. I will now heat them. If one or both bars expand and come in contact with this screw the circuit will be completed, and a current of electricity will now pass. This is now the case: the platinum wire becomes red-hot, and now observe I can take away the bar of iron without altering the condition of the wire—that is to say, it is the brass wire which has expanded most and completed the circuit. A thermometer has been constructed on the principle of the unequal expansion of different metals, which thus measures temperature in a manner independent of the expansion of liquids. A thin strip of brass is rivetted to a strip of silver, and the compound bar is coiled into a spiral, one end of which is fixed; the other carries the index, and moves over a dial. This instrument is not much used, because the metals are apt to get set, and not indicate the same temperature for the same degree of heat. We have, therefore, established this point, that different solids increase in dimensions, unequally for the same increase of temperature.

With regard to liquids, we have already seen that alcohol, water, and mercury expand on being heated. Here are three exactly similar flasks, with tubes inserted through their corks, and the flasks are each filled with one of these liquids. All of them stand in a large basin. If now I pour hot water into the basin all will be equally heated, and the liquid rises in the tubes, but not to the same height in all; it rises highest in the flask of alcohol, next in the flask of water, and stands lowest in the flask of mercury. Thus we see that there is an unequal expansion of liquids for the same increase of temperature. We have already seen that gases likewise expand with increased temperature, but they differ from solids and liquids in that all gases expand equally for equal increments of temperature.

COAL, AND COAL MINING.—At the first Lecture and Conversazione for the present season at the South Hampstead Collegiate School, Belsize Park-gardens, as on former occasions, there was a large and fashionable assemblage. The lecture was on the subject of "Coal, and Coal Mining," and was delivered by Mr. F. A. NEW, manager of the Joint Stock Coal Company, a gentleman thoroughly conversant with the subject. Last year Mr. New delivered an instructive lecture on the subject of "Coal." This lecture was in continuation thereof, and was interesting, instructive, and entertaining. Mr. New's observations being illustrated by a number of well executed dissolving views. After recapitulating the principal facts of his former lecture, Mr. New called attention to the underground operations after the coal is reached, the cardinal points which he mentioned being the system of working the underground transport of coal, and the method of ventilation. He dwelt largely upon the characteristics of "the lads below," as the colliers call themselves. Their habits he described as being as distinctive as those of sailors or fishermen. As a rule they were uncouth and uneducated, and were given much to strikes. They did not mind working hard, but did not like too much of it. They were heroic in times of danger, very hospitable—often killing their sick friends with kindness—and themselves fond of good living. They had much leasure time, and generally made a bad use of it, by attending cock and dog fights, pigeon matches, races, and village wakes. They were superstitious, and easily deterred from going down the pit. The pitman's house he described as being neat and clean, never without a roaring fire, and always furnished with a four post bedstead and large chest of drawers. Their earnings for eight hours' work per day varied from 8s. to 12s., although some even earned as much as 1*l.* per day. The pit, however, had contributed its fair share of eminent men: the lecturer referring specially to George Stephenson, who commenced life as the driver of a colliery gin horse; Savery, who spent his earliest years in a mine; also to Ople, Dr. Hutton, and Thomas Bewick, whose earliest recollections were those of plying the pick by the light of a glimmering candle for bread. Art, science, and literature had been aided by eminent miners. Mr. New described the miner's tools, and the method of lighting the pit, and showed the way in which the coal was got, especially pointing out the danger of blasting in pits where there is fire-damp. The various causes of accidents were referred to, and the way in which the coal is transported underground explained. This work, which formerly was done by women and boys, was now principally performed by horses and ponies, unless the workings were very small, when boys were employed. He was sorry to say that women were still employed in India in a similar way to what they were in Scotland prior to the passing of Lord Ashley's Act in 1843. Accidents from explosions of fire damp were fully described, and the need of adopting the best plans of ventilation enforced, the lecturer considering no system too expensive where human life was concerned. The same remark was also applied to timbering and the machinery employed at the pit. The lecture was listened to with great attention by pupils and visitors alike, and at its conclusion Mr. New was rewarded with the hearty applause of his audience.

VISIT TO A LEAD MINE IN SCOTLAND.

Lead mining has been carried on in Minnigaff parish for more years than would be within the ken of even the oldest inhabitant's great-great-grandfather—indeed, tradition hath it that the Romans were the first to pierce beneath the hard grauwacke and bring to light the precious ore; and that from the distant then until the present now operations have been carried on with more or less vigour and success. To one of the flourishing class—the BLACK CRAIG MINE—we recently paid a visit, a brief account of which may not be altogether uninteresting. Mr. Ashe, one of the managing directors of the company which owns the mine, accompanied us. We are soon at the mine, and the ring of the blacksmith's hammer, the whirling wheels, and the signs and sounds of life everywhere apparent, proclaim that here business is meant, and that that business is being prosecuted with systematised vigour. A large new engine house is being erected, and several parts of the new engine are lying about waiting for work; while on every hand the waters which have been drawn from under the earth are being run along in wooden channels, doing doughty duty ere they escape from bondage to the bay beyond. Entering the agent's or captain's office, we find a flannel suit and outside "accompaniments" hanging on a horse before a blazing fire, in expectation of the visit.

Arrayed thus, and under the guidance of Capt. Cogar, we soon make a dash from the office fire, through the chill air, to the pit's mouth, the appearance of which causes us to open ours with amazement, as the truth is made manifest that the 132 fms. between bank and bottom have to be gone through on almost perpendicular ladders. We had seen coal pits, and noted how snugly the miner ensconces himself in a cage to be reeled therein to the bottom; and some such contrivance had risen before the mind's eye when the promise was given to "go down and see the workings." Hence the dismay when the narrow hole, with a ladder poking out of it, presented itself as the one means of communication for everything human with the depths below. But the metaphorical hand having been put to the metaphorical plough there must be no turning back; so from the first rung of the lengthy ladder we fling a message to wife and weans, *viz* our smiling friend, and down we go into the depths, hoping the best.

Dimmer and dimmer grows the light as step after step is taken on the perpendicular and ever-darkening ladder; and as twilight is succeeded by gloom, and gloom by a darkness which may be felt, the fact that a false foot-step, a rotten rung, or a weakened wrist may precede a hurl into the gulf below is far from re-assuring. The grimly-jocular or jocularly-grim query, "Were a man to fall from the ladder, what then?" and the equally grim reply, "Well, he wouldn't be worth picking up—that's all," do not tend to lighten the gloom; and clank-clank, clank-clink, go our heavy hob-nailed boots on the iron bars of the ladder—sounds which remind us of the echoes from distant tombs.

When Capt. Cogar arrives at the bottom of this, the first of a series of ladders—the end of a shaft which runs out upon a distant valley we afterwards learn—he strikes a light, and soon a couple of candles make the surrounding darkness grimly visible. By means of clay—reserves of which the miners seem to keep at frequent intervals—we each stick the dip in front of our helmet-like caps (some 2 or 3 lbs. weight these hats seem, by the way), and thus illumined we renew the toilsome journey downwards. The surroundings seen thus are dismal in the extreme; jagged rocks, adown which trickle and drop the ever-present water, slime, and round on every hand props and stays to keep the less solid sides from falling in. On the left is the shaft proper—a yawning gulf, up and down which comes and goes at intervals a huge jug like kibble, in which the ore is taken to top. Now, as we see and hear, this kibble bumps against the ragged sides of the shaft in its upward journey, then it swings sullenly in the middle, and anon it slides steadily down a wooden pavement like rest.

The left arm rubs meanwhile uneasily against a moving iron rod as we descend—the means of communication between top and bottom, and every now and again the body has to be squeezed through a man hole (our candle being more than once extinguished in the operation), through which the Tichborne Claimant would attempt to wriggle in vain. At certain stages we come upon cranes, planking, and other working materials—the lumber legacies of former owners, not only in the way when the mine has been sunk deeper and deeper, and newer workings opened out. These are now rusty and weird like, though even in this gloom life asserts itself around them, as various fungi are seen clinging here and hanging there, stangely bleached and colourless.

We stop at the various levels—the 30 fathom, the 60 fathom, the 80 fathom, and so on—and candle in hand now, pick our way warily over masses of ore and under ragged archways like unto tunnels. Bump! every now and again comes the head against some rocky promontory—bump! again, it goes as another catches it in the rebound; and it is then that we bless the thickness of the helmet like hat, and rejoice that we were not left to the freedom of our own will in the matter of dress. There is no wintry weather down a mine—summer and winter, seed time and harvest, it is all the same here; and the perspiration has by this time come out on the forehead like great beads. Were such a thing procurable, a pint of bitter would be worth its weight in silver. Above and around us, meanwhile, gleam the welcome lead—now appearing in clumps and patches, and again in streaks, running away and losing themselves in the dim distance. We pick up several lumps of what seem stones; but the immense weight of each tells of the dirt encrusted metal. Every now and again the lead will disappear entirely, and we come upon giant blocks of whinstone and masses of coal-like rock—which latter, we are told, crumbles into its original dust when brought in contact with the light and air above. Most of the new cuttings are into what is called "kindly" or "fatty" ground; and when the new engine is at work above, and more hands blasting and digging below, the valuable ore we see all around will be taken more rapidly and in larger quantities to the top, to the joy and profit of the ever-expectant shareholders. But down we must go; and with candle once more firmly fixed in helmet, we prepare to again hand-and foot it on the now familiar ladder. Every now and again we come upon a goblin like miner, candle-illumined and grimy, prosecuting his work as cheerily as though his workshop were doored and windowed, and opened out upon a street. Down, down we go—clink-clank, clink-clank; the rumbling of the trucks and the echoing of the blast below sounding weirdly in this ghostly hole, while the smell of the villaneous saltpetre suggests thoughts too horrible for utterance.

Here we are at last, at the very bottom—nearly 900 ft. from day light, every inch of which has been gone over, or rather under, almost, if not altogether, on the perpendicular—hand under hand, foot under foot. We sit down here to rest—hot and tired, the sinews of wrist and arm standing out like whip-cords, a strange weakness about the ankles and knees, and a feeling of all overishness as though this deep depth was the hottest chamber of a Turkish bath. Chatting here, we learn from our guide—who has inhabited a mine, as it were, ever since he was so high—many hitherto unknown facts, and listen to several thrilling adventures not at all reassuring with millions of tons of rock between us and the ladder top. It takes, it seems, the workmen 20 minutes' steady tramping to come from top to bottom, and they need no rests for nerve or sinew, be it remembered, while the upward journey occupies fully half an hour. They work in shifts—eight hours at a time—and are paid either by the "piece" or hour, according to the nature of the work. They generally work in twos, and each couple receives weekly 3 lbs. of candles, and a supply of gunpowder for blasting purposes. To say that they are contented with everything would be to write them down more or less than human, but their lot is far from an unhappy one, and they seem intelligent, sober, and industrious, and to take a kindly interest in the success of the mine.

Refreshed by the rest and the chat, we begin to explore these bottom-most workings, and soon find that lead is here in great abundance. In the course of our circumambulations, we come upon the bottom of the shaft, where a man is busy filling up the kibble from a mass of ore before him, brought here by little wagons from all the galleries by means of ingeniously contrived trap-doors. Round and round we go, east and west, north and south, to the extremity of each working—lead and blende glistening in the candle light on roof, wall, and floor almost everywhere. Having explored these workings, and seen, so far as a non-practical man can see, the riches yet unbiassed, and heard, with becoming faith, the glowing predictions of our guide, we hint about returning upstairs, having a wholesome respect for the 900 feet ladder before us.

Do you think you could come up here? queries our guide, pointing to a swinging chain-ladder about 5 feet from where we stand; and though the climbing of swinging chain-ladders, each step of which is a joint, is not our strongest point, we express a willingness to try what can be done. Up goes Captain Cogar, as easily though he were not a grandfather, and Mr. Darwin was in the right of it, and as him we wriggle, tossed about by every moving link, struggling to keep the perpendicular, and straining every nerve to make the difficult task seem easy. Something like *terra firma* being reached at last, and a little rest indulged in—the rests are coming annoyingly frequent now, it is to be feared—along several chambers galleries we prowl, dodging a rocky headland here, and jumping and splashing wading there, pass the sump somewhere near a tramway—an ugly looking mass water, crawl through various holes, and climb over innumerable masses of ore all fours, finally sliding down an inclined plane of wood, and dropping upon old level several feet below. Yes, I think we will really begin to go up now; what is still hidden will be but a reproduction of what we have seen probably, and speeding thus we light another candle, fix it with clay in the now heavier-than-ever helmet, and begin the upward task. And a weary, fatiguing task it is; each successive ladder seeming less slantindicular and wider apart in the steps than that which has gone before. Every now and again bump goes the helmet against a man hole, smashing the candle and staggering its bearer, and almost rousing the wish that we had gone, though with our life in our hands, up in the kibble among the ore.

About midway up we meet the descending shift, and sitting down on a convenient plank behind the water pipe, we listen to the clink clanking of the coming men, to whom the journey seems as easy as to walk along a pavement. As each emerges from the darkness with a candle in his hand and a bunch at his button hole, and disappears in the depths below, to be succeeded by another in like manner and another, and another, the effect is as weird-like as it is novel: and as the distant footfalls gradually die away into silence in the hollow distance, we prepare anew to struggle for the upper air. Like all difficult duties resolutely faced, this one is finally accomplished, after many and oft-recurring rests—the downward rush of cold air, the lessening light of the candle, and the grey smoke like light on our left which fills up the shaft, telling of the ever nearing top. A shiver succeeds to the overpowering heat which, with the unwonted exertion, has opened wide every pore and parched the throat to painful hoarseness, and mud-begrimed and weary though we are, we make a run for the office, not many yards distant, glad to be within its walls once more. In order to appreciate health, it is said, to know one's former self! To know all this, to value them as they ought to be valued, by all means descend a mine. It was nearly eleven o'clock when we went down—it was nearly three when we came up—and though it may not sound heroic to say so, we would not have descended that seemingly endless ladder again that evening save under a pressure which would not take "Nay" for a negative.

But, washed and refreshed, let us see what is done with the ore, now that it too has come to the top. Well, let us go to the pit's mouth. Here comes the kibble full of ore, which latter is toppled into a wagon, and off it goes; follow it along the little line of rails, and see, it is pitched into a wide-mouthed hopper, the sides of hopper being something like a huge filler, having a trap-door at the bottom. Under this hopper—on a lower level, of course—a boy places another wagon, which he fills, shuts the trap door, and hurries off with. The ore is next tumbled into what is called a "sizer"—a perforated revolving drum, out of which the large stones (or lumps of ore) fall on one side, the small ones on another, and the gravel underneath. The ore is thus divided into three heaps—large lumps, small lumps, and gravel; and a machine called the crusher, aided by a hand propelled hammer in the case of the largest lumps, soon reduces the whole to a state of equality. Now come into play the washing floors, where the pounded and broken up ore is presently introduced. It is first put into a jigger—a peculiar looking instrument, comically worked by a woman. There are five of them here, each jigger—called so from the jigging motion of the woman who propels it, evidently—being finer than the one immediately next it. The crushed ore is shovelled (say) into the first one, consisting of a perforated open box, which is jigged up and down in a troughful of ever-flowing water. The jigging over, the woman skims the now washed ore with an iron scraper. The first skimming is gravel, which she flings over the bank, where it is sold for garden-walks, &c.; the second skimming is blende, or ore of zinc, here put in a separate heap; and the third, or undermost layer, is pure lead. This lead is then put through other and finer jiggers, and shaken and washed free from impurities and foreign matter, until ready for market; and beautiful it looks, as it comes from its last bath, the lead obtained from this Black Craig Mine being of excellent quality. The very fine sand, or slime, which escaped from the crusher is raked from the bottom of the trough, and washed in a series of pits and most cunningly constructed vessels, until the last particle of lead is extracted from it, and only the dirt allowed to go free. In these slime-pits, &c., the present proprietors of the mine—it is only three years since Mr. Ashe purchased it for the present company (the East Black Craig Mining Company)—have introduced a great improvement. Under the old *regime*, no such pursuit of the lead to the bitter end, so to speak, was engaged in; and the consequence was that much valuable metal was washed into the bay. When it is remembered that lead sells at present for 15*l.* and 16*l.* a ton, and that the lead of this mine always commands a ready sale because of its excellent quality, it will easily be seen how even this neglect might turn profit into loss. All this sizing, and jigging, and more minute manipulations are carried on by water-power, the company having erected several large dams, besides making use of the water pumped from the mine.

It is expected that the new engine house will be completed and the engine erected in about six weeks, after which great things are looked for. Time was when these mines were made to yield their thousands of tons annually, and it is confidently expected that the future, owing to improved machinery, a greatly increased demand, and a seemingly undiminished supply, will be even better than the past. However that may be, there can be no doubt that a visit to Black Craig Mine is of very great interest; and though the toil is great in going from top to bottom, and through the various workings, and from bottom to top, the subsequent pleasure is much greater still.

THE STUDY OF MECHANICS AND ENGINEERING.

Few probably did more to encourage the general study of Applied Mechanics than the late Prof. RANKINE, but it must at the same time be admitted that inasmuch as the reading of many portions of his works involved the assistance of a teacher somewhat above the ordinary standard, not only have many students failed to secure the full advantages derivable from the records of his researches, but the books themselves have enjoyed a less favourable reception than might otherwise have been anticipated for them; this drawback will now no longer exist, the Mechanical Text Book,* just completed by Mr. BAMBER, being in every respect what it professes to be—an introduction to more abstruse works on engineering and mechanics, and in particular to those of the late Prof. Rankine. The study of the present volume demands, as it is explained, only a previous acquaintance with the ordinary rules of arithmetic, and with the elementary algebraical notation. The ability of Mr. Bamber to undertake the task of completing such a volume cannot be doubted; he was Prof. Rankine's assistant, and was during the Professor's illness entrusted by him to lecture in his stead. At the time of his death, two thirds of the book had been already completed, and the general scope and plan of the work decided upon; and in completing the work Mr. Bamber claims to have implicitly carried out the Professor's wishes in every respect, so far as lay in his power.

That the full advantages of the work may be secured to the students using it, there is given in the mathematical introduction several of the more important and less generally understood arithmetical rules; a good sketch of the nature and use of logarithms, and a summary of the principles and chief rules of trigonometry. The rules of the differential and integral calculus are particularly clear and explicit, as are those for the mensuration of figures and finding of centres of magnitude. In the concluding article of this introduction, mechanics is defined to be the science of rest, motion, and force, and a point is said to be the boundary of a line which many will regard as an unsuccessful effort to improve upon Euclid's definition, and it is difficult to justify the spelling of kinematics with *c*, without at the same time treating of "cinetics." Apart from these little eccentricities the introductory chapter is undoubtedly good. The first part treats of the principles of kinematics or the comparison of motions, the several chapters dealing with the motions of points, rigid bodies or systems, and of pliable bodies and fluids respectively. In the second part, treating of the theory of mechanism, there are chapters on the general principles of the subject, on elementary combinations and trains of mechanism, and on aggregate combinations. In subsequent parts the principles of statics, the theory of structures, the principles of kinetics, and the theory of machines, are in turn treated, of the whole being well calculated to prepare the student for any work upon the subject to which he may afterwards give his attention.

The work, as a whole, is very complete, and from the arrangement adopted is likely to prove invaluable for furnishing a useful and reliable outline of the subjects treated of, which can be conveniently filled in afterwards, especially if Prof. Rankine's larger works be employed for that purpose. Mr. Bamber is engaged upon new editions of the Professor's other works, and from the manner in which he has performed his present task, it may fairly be presumed that the useful labours of Prof. Rankine will continue available through the exertions of his assistant to keep the volumes in accordance with the latest researches and most advanced views.

* "A Mechanical Text Book or Introduction to the Study of Mechanics and Engineering." By W. J. MACQUORN RANKINE and EDWARD FISHER BAMBER, C.E. London: Charles Griffin and Co., Stationers' Hall Court.

ECONOMY OF FUEL.—A large and handsomely printed sheet, describing the improvements in the construction of steam-boilers, invented by Mr. GEORGE RYDILL, of Quality-court, Chancery lane, has just been issued, by Mr. Samuel Palmer, of 335, Strand, under the title of "England's Duty, and What it should do to save 50 per cent. of our coal, and enable us to stand with our trade and commerce at the head of the World." The description is claimed to embrace Mr. Rydill's new ideas and inventions introduced to the world in steam-boiler engineering in its various applications to merchant steam ships, war ships, small yachts, factories, railways, print works, paper-mill, bleach works, agriculture, water works, mines drainage works, and in any other purposes; also an improved hot air producing apparatus for smelting and other furnaces, drying, warming, and other purposes, and a ships ventilating funnel. The inventor calculates that his sectional boiler will save 25 per cent., his feed-water heater 15 per cent., and his heated air apparatus 10=50 per cent. in all. Mr. Rydill, whose "private and public life are open for investigation," thinks that "with his improvements, and the aid and will of the Government, the coal famine, as we now call it, might be entirely remedied at once, which at this moment is wounding the heart of every honest hard-working man and woman in this country besides many of the rich, and injuring our trade." Mr. J. Reiffern, of the Steam Boiler and Tank Works, Portsmouth, reports that the saving of fuel effected by using a boiler made on either Mr. Rydill's sectional return tubular or return flue principle he is convinced would be 30 per cent. at least.

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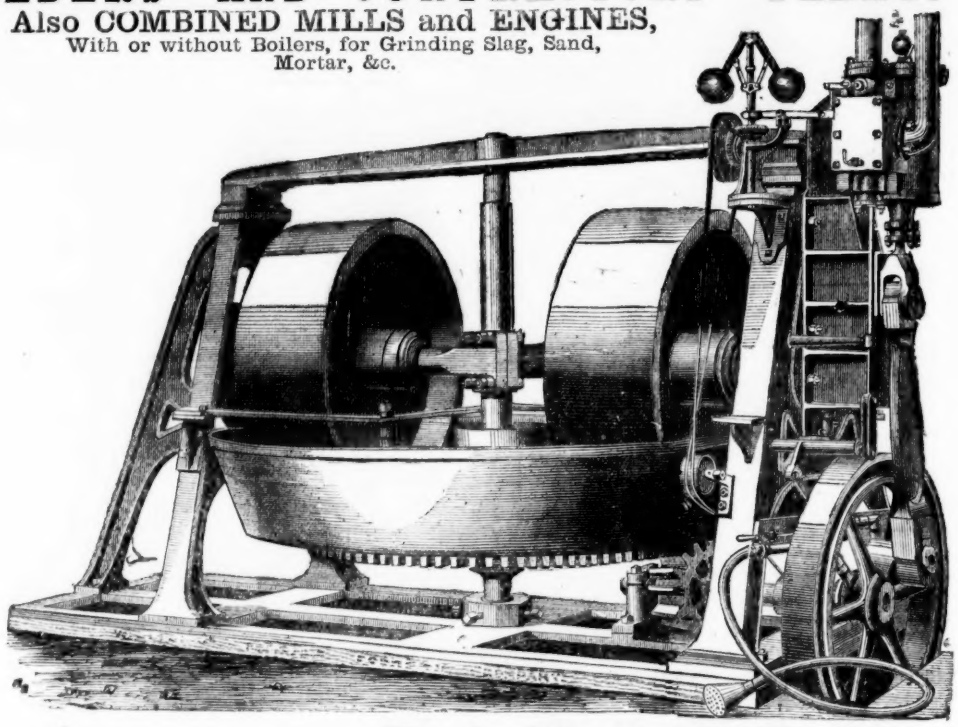

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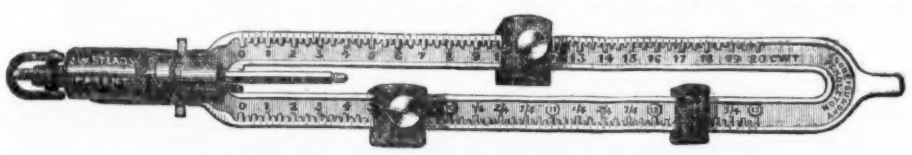

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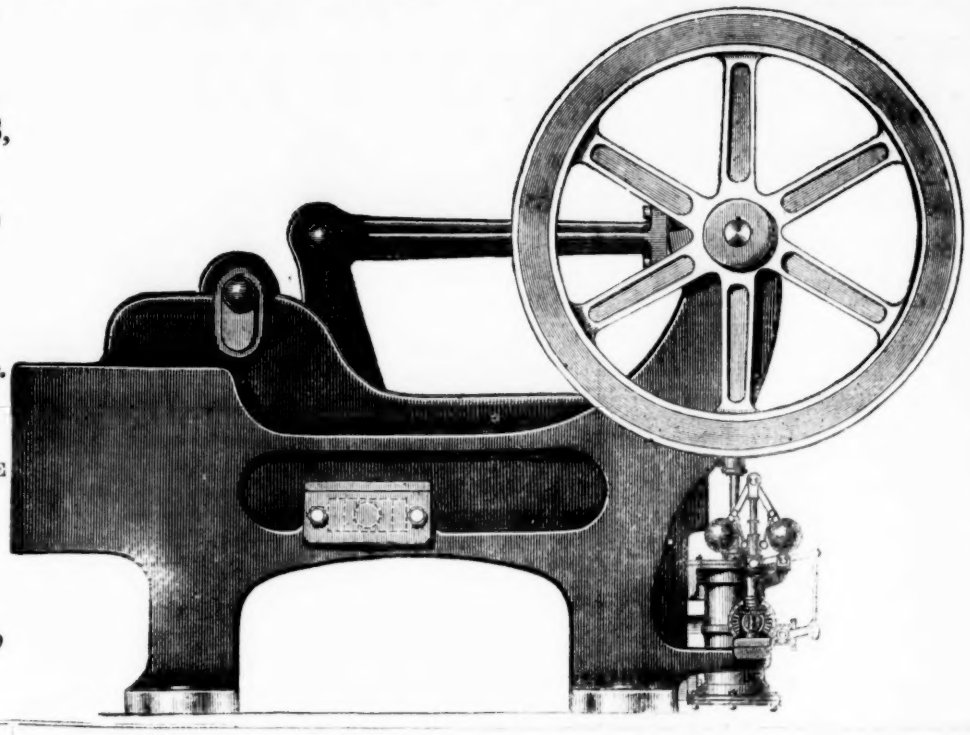

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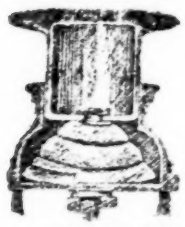

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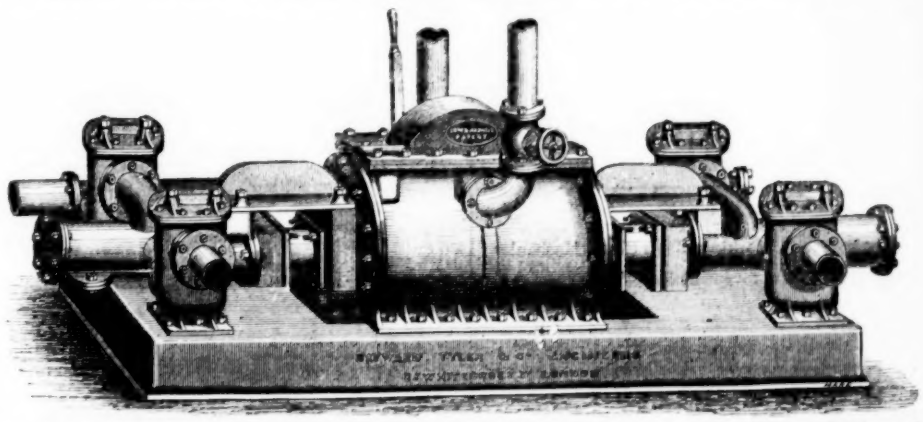

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